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1879.

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PROCEEDINGS

OF THE

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

STATED MEETING, FEBRUARY 18, 1879.

MOUNTAIN AIR FOR POOR SICKLY CHILDREN.

BY H. B. WHITE, M.D.

Rev. Willard Parsons, pastor of a small church in Sherman, Pa., formerly a laborer among the tenement house population of our city, and knowing their needs and deprivations, conceived the idea of benefiting a few of the most needy by inviting them to spend at least two weeks in his mountain home.

If he could do it, why not others of his congregation? This thought grew, till he was inspired one Sunday morning, early in June, 1877, to present the subject to his small congregation, made up mostly of farmers in very moderate circumstances.

To his surprise, the hearts of his people were moved, and they freely opened their doors, some offering to take two, some three, others four of these city poor, and give them every needed care for at least two weeks.

The next question was one of importance—viz.: how to select the children. They must be those who needed a change of air most, and have no other possible chance of obtaining it; but they must not be so sick as to require constant nursing, or so young as to need the care of parents; nor afflicted with contagious diseases, which might spread among their benefactors in the country. I undertook to look after that branch of the work for the Western District of Brooklyn. The result of the sum-

mer's work was most gratifying. Sixty persons were sent out in three separate bands, and at different times, remaining from two to six weeks each. Of the sixty, three were adults, seventeen between the ages of 12 and 20, and the remaining 40 were under 12 years of age. All were taken from the very poor, though not from the "class that usually beg from door to door." They were selected mainly with reference to their physical condition, and were suffering more or less with some chronic disease born of neglect, privation, filth and foul air.

Prominent among the diseases represented were scrofula, consumption, chronic bronchitis, asthma, hip-joint and spinal troubles.

Among them were confirmed cripples, as well as those in the incipient stage of more or less incurable diseases; while others were simply in bad health, delicate or sickly, the result of impure air or insufficient and improper food. Enfeebled by want and disease, bred in poverty and filth, no wonder their faces, for the most part, were thin, pale and haggard, and even their smiles feeble and sickly.

These children were taken 180 miles from New York City, and distributed among the farmers on the hills of Sherman, to inhale pure mountain air, free from the poisonous miasm of the crowded city; to find plenty of simple, wholesome food, and for once in their lives to enjoy the luxury of clean beds and well-ventilated sleeping-rooms.

As far as possible, they were sent out with suitable clothing for out-of-door country life, with instructions to spend all the waking hours in the open air. That hint was not needed. The delightful change from the city to the country, the scenery, and everything connected with their temporary homes, was so entirely different from their accustomed mode of living, that it kept them on the move in the open air from morning till night.

This regimen, continuing from three to six weeks, produced wonderful results. Appetites improved, coughs ceased to be troublesome, ulcers healed, growing deformities were arrested, cheeks filled out and grew ruddy, spirits became buoyant, the step elastic and child-like, while the sickly smile gave place to the hearty laugh of childhood; or, as very happily expressed by a friend, "They went out men and women—they came back little children."

I would like to speak of special cases, but not anticipating a request for a detailed report, I took but few notes, and must, therefore, depend upon memory and be very brief.

The few cases of confirmed phthisis were very much improved. One especially, Mrs. M., about thirty-five years of age, had been suffering with consumption for more than two years, which had reached an advanced stage, with loss of appetite, purulent expectoration and hectic

fever. Her two months on those country hills evidently gave her a new lease of life. She was able to take long walks in the open air, which she had not done for a year or more—her appetite was good, weight increased, and cough became less troublesome. The healthy stimulus received during those two months seemed to carry her through the winter, when another trip to the mountains again brought relief, and she is passing through this winter with more strength and more ability to take exercise in the open air than she had the two previous winters, rendering it morally certain that this open-air treatment has prolonged her life and added greatly to her enjoyment.

Another marked case of improvement was a boy, five years of age, who had been suffering more than a year with disease of the upper dorsal vertebræ. The disease had been detected in its earliest stages, and as the mother, a widow with five young children, was very poor and unable to give proper care or suitable food to the little patient, I had him sent to an hospital in New York established for treating such cases, expecting he would receive such special treatment as his case required. After a residence of some months in the hospital, finding that nothing was done for him excepting allowing him to live there, and that he was constantly growing worse, the mother clandestinely brought him away. I found him in constant pain, nights restless and sleepless, appetite gone, emaciation extreme and deformity increasing. In that condition he went to the country, with his little brother, seven years old, for nurse and guardian. A few weeks' residence there produced a marvelous change. He came back hale and hearty, health completely established—his spinal trouble arrested—indeed, *cured*. He is now in the Brooklyn Orphan Asylum, and at last accounts in good health and with but slight deformity.

Last summer (1878), Mr. Parsons, profiting by his experience of the previous year, resolved to extend the work and its benefits. He started out in the spring to visit the towns on the line of the Erie and New Jersey railroads, to plead the cause of these city waifs, and obtain that co-operation from the inhabitants of the country towns which this plan of caring for the city poor requires—viz., free board for each one for at least two weeks. He succeeded beyond his most sanguine expectation. Towns and villages vied with each other in their friendly interest in this most disinterested charity, in some instances contending in pleasant rivalry for the privilege of being first to entertain these city strangers. Almost every house in the localities visited offered hospitality to two or more needy children, and single villages provided in this way for whole car-loads at one time.

At first thought it would seem that right here this great charitable en-

terprise would meet its chief difficulty. Would there be a sufficient number of homes offering shelter and care for all the sick poor of the city who needed recreation and pure country air? More than enough offered to care for all who could be collected and transported under the supervision of one man, and by the simple means employed; and even at the close of the season many towns requested to be remembered in the distribution next year. By experience, the greatest difficulty was found where least expected. The farmers and country people generally gladly opened their doors. Money was forthcoming in abundance to pay for the transportation, almost the only expense, thus far, attending the enterprise. But great care and discrimination was found to be necessary in selecting those who should be recipients of this bounty, and then, often, there was great opposition, either on the part of the children or their parents, to their taking so long a journey from home. In some cases consent could not be obtained until others had been out and returned, assuring safety and success.

The New York *Evening Post* readily engaged to advertise for donations to the "Mountain Air Fund," and to disburse the money for the donors. The total amount received was $2,980; with this sum 1,076 needy ones, large and small, old and young, were transported to country homes, from 100 miles to 300 miles from New York City, and given fresh air, wholesome food and clean surroundings for from two to four weeks.

The whole number selected under my own supervision was seventy-seven—fifty-seven from five to twelve years, seventeen from twelve to twenty, and three over twenty years of age. As to diseases, they were classified as follows:

General Debility	48
Deformities	7
Hip-Joint Disease	5
Spinal Disease	2
Knee-Joint Disease	1
Consumption	5
Bronchitis	4
Chorea	3
Chronic Ulcers	2
Total	77

All those whose health was being slowly undermined by living in the impure air of crowded and badly ventilated apartments, or from insufficient and improper food, as well as those enfeebled by a previous attack of some acute disease, were classed under the head of General Debility, without reference to the cause of their physical condition. Nearly all of this class returned home completely restored to health. All others were greatly benefited by the trip, and, if not cured, in many cases with disease arrested for the time being at least. All the

cases of Consumption improved. One young woman, aged twenty-three, inheriting phthisis from her mother, and suffering for more than a year with hemorrhages, harassing cough and profuse expectoration, was so exhausted by the trip on the "Annex" to the Erie Railroad Depot, that Mr. Parsons, the Superintendent, had misgivings about the propriety of her going on, fearing the result. She was carried through safely, though soon after arriving at her destination an attack of hemorrhage prostrated her still more. In two weeks from that time Mr. Parsons did not recognize her as the emaciated, fainting girl he had transported with so much fear and trembling. Her appetite was good, spirits buoyant, and strength had so far improved that she was able to take long walks every day. She returned, after an absence of six weeks, literally another being, resuming labors which sickness interrupted in the shop where she still continues to work—another striking example of the superiority of fresh air and out-door life over all other methods of treatment for consumptives. Very marked improvement was also observed in nearly all the cases of joint and spinal diseases. They generally were directed to leave their splints, braces and various mechanical contrivances at home, for the reason that neither their physicians or their mothers would be with them to keep the instruments properly adjusted, and were instructed, like all the rest, to live in the open air during all their waking hours. If unable to walk much, they were told to find the nearest trees and lie in the shade all the day, or, if the heat was not too great, it would be all the better to lie in the sun at least part of the time. This regimen soon wrought wonders in these poor victims of poverty, hereditary vice and filth ; appetite returned, color lighted up pale faces, facial lines of suffering and privation gave place to appearances of returning health and vigor, while some returned to the city with disease completely arrested, and that, too, by no other than dietetic and hygienic treatment.

Results so gratifying, after only a few short weeks of fresh air treatment, inspired the wish that our hospitals for these poor, crippled, diseased children had been established in healthy country locations, rather than in the crowded city, and that much of the money now expended in stately palaces, which prove but little better than elegant prisons, might have been laid out on broad acres, where pure air and health-giving exercise—God's medicine—the best restoratives to diseased, wasted and impoverished bodies—could be freely enjoyed. Perhaps this dream will yet be realized in the not very distant future.

The immediate results obtained in arresting disease and improving health was not, by any means, all the good accomplished. The green fields, the woods, the mountains and valleys, even the clean dirt, and

the plain, simple, country life, opened up to every child a new world, and revealed possibilities in the enjoyments of life never dreamed of before. Many a girl returned to her home dissatisfied with its surroundings, because she had been born again to a new life, and began at once a reformation tending to cleanliness and order. Many a boy was heard to say, wait till I am big enough, when I will go into the country and have a farm of my own. The distance between the homes in our tenements and brown-stone fronts is so great, that our boys hardly expect to leave the former for the latter; but the unostentatious, cleanly, attractive farmer's home seemed easier to attain, and gave birth to new ideas and aspirations.

The unconscious influence of this one summer's work upon the children fortunate enough to receive its benefits can never be measured, though in cases that have continued under observation, I can already trace good results, in stronger bodies, sounder minds, and nobler ambitions for better homes and better lives.

As it is the duty of the medical profession to conserve the public health, prevent disease, and improve the average of human life, *we* ought to be first and foremost in encouraging and co-operating in this good work of sending our ill-fed, badly-nourished children of vice and poverty to temporary country homes for recreation and restoration, thus improving health and morals, alleviating individual misery, and increasing the longevity of the race.

DISCUSSION.

The President, Dr. Prout, in inviting discussion, remarked that the mountain air charity was praiseworthy in this, if nothing else, that it shows the rising generation of our cities that the country is a place worth living in.

Dr. A. R. Paine: Certain patients, under his care for diseases of the hip and other joints, had been sent into the mountains through the agency of Dr. White. Some of them were greatly debilitated from disease. They all returned improved in color, weight and appetite, and the beneficial effects last to the present day. Some were especially fortunate in the formation of friendships of a permanent and improving character. It will be a blessing to the poorer classes if the work of Dr. White is still further increased in future years.

Dr. J. Walker: This charity is founded upon what is called the Copenhagen plan, and the plan that has been in operation in and around Boston. The important question in connection with these summer charities, at the seaside and on the mountains, is to properly select the

cases which shall be recommended by physicians for these respective localities. An accurate study and comparison of results should be made in future summers. One point appears to be demonstrated—namely, that phthisical subjects do not improve at the seaside.

Dr. E. R. Squibb: Chanced to meet a returning car-load of children who had been sent to villages on the road from Albany to Binghamton. Whatever their condition may have been when they set out, they returned in good spirits, good temper, and were cleanly looking.

Dr. White: The entire number sent out from New York and Brooklyn last summer was 1,076. Under the other plans for sending away invalids and weak children, the board is generally paid for from contributed funds, and the people are housed in one or more large boarding-houses. But under this plan the children are taken and cared for gratuitously, and only one or two in a given house. The farmers open their doors to sickly, perhaps dirty, children, and some with bad habits.

THE IODIDE OF POTASSIUM IN THE TREATMENT OF ASTHMA.

BY B. F. WESTBROOK, M.D.

The following notes of cases of asthma in which the iodide of potassium has been used are intended simply as a contribution to clinical medicine. I do not propose to discuss the various theories as to the nature of asthma. The term, as used by me at present, is applied to the condition which is characterized by dyspnœa of spasmodic character, not dependent upon cardiac or laryngeal disease. It is accompanied by prolonged and difficult expiration, with dry râles. It may be associated with emphysema or bronchitis, or with no apparent lesion of the lung.

In the latter case it is known as "nervous asthma."

The following cases were all associated with apparent pulmonary lesions, either bronchitis or emphysema. They were all treated by me in the out-door department of the Long Island College Hospital.

No. 1.—An Irish woman, 50 years old; married. Her health had been good up to two months ago. Since that time she has had a hard, dry cough, accompanied by slight tenacious expectoration. After eating she has a feeling of distress in the epigastric region and a belching of gas. Coincident with this there is an accession of dyspnœa. At night she has great dyspnœa and a noise in her chest. This passes off in the morning, when the expectoration becomes more free.

The chest is resonant on percussion; the respiratory sounds harsh, and accompanied by sibilant and sonorous râles, particularly on the right side. There are a few moist râles in the upper part of the right lung. The vesicular murmur is indistinct. She was given the following mixture: Take of potass. iod., 1 drachm; syr. senegæ, 4 drachms; aquæ ad 3 ounces; mix; a teaspoonful four times a day. At the end of a week she reported that the dyspnœa was greatly relieved and that she felt better in every way. The dose of the iodide was increased from 2½ to 5 gra She continued to improve for two weeks more, when she ceased coming.

No. 2.—This was an Irish laborer, about 30 years old. He was employed on a railroad and was compelled to work on the track, frequently in wet weather, and when the damp earth was being turned up. He had a good family history, except that his father had suffered severely from asthma in the latter years of his life.

The patient had been healthy up to August, 1877. He then, after working in a very wet place for some time, had a severe cough, with a small amount of thick, tenacious expectoration.

In the night he had terrible attacks of dyspnœa, which obliged him to leave his bed and sit by the open window. Toward morning the dyspnœa would subside, with the occurrence of more free expectoration. He had been suffering for two weeks when he came to the dispensary. Examination of the thorax gave the signs of bronchitis, with the dry râles of asthma. The tongue was coated and the bowels constipated. He was ordered 12 grains of calomel to take at night, and a mixture containing hydrarg. bichlorid., 3 grains; potassii iodid., 2 drachms; syr. senegæ, 3 ounces; mix; a teaspoonful three times a day. Two days afterward he reported that the dyspnœa and cough were considerably relieved. The mixture was continued for ten days longer, when the bichloride was discontinued and the bromide of potassium and hydrocyanic acid added to the mixture. The latter ingredients were added with the object of relieving the cough. It has appeared from my observation, that while the iodide relieves the dyspnœa, it does not have as favorable an effect upon the cough. In five days more, the dyspnœa having entirely disappeared, he was given a stimulating expectorant. This was followed in a few days by a tonic, and we saw nothing more of him for five months. He then came to the dispensary again, in my absence, and was seen by my friend, Dr. Kretszchmar. He said that he had been perfectly well during the five months, but had recently caught cold again and the trouble had returned. The doctor attended him at his house for some time, but failed to relieve him. He transferred him to me at the end of a month, and I labored with him for several weeks with no better success. His

symptoms during this time were as follows: Almost total anorexia; the tongue covered with a heavy white coating, occasional vomiting, constipation. Frequent cough, and the most intense dyspnœa, lasting throughout the twenty-four hours, but worst at night. A copious expectoration of thick, sticky muco-pus. The color of the face varied from a dusky hue to a distinct purple. The thorax was distended, and its movements only slight, in spite of his great exertions; the percussion note was very resonant. Upon auscultation no vesicular murmur could be heard, but loud whistling râles were audible over the entire chest, with large and small mucous râles, particularly in the right lung. Expiration was prolonged. Repeated examinations led to the discovery of no complicating diseases in the other viscera. Notwithstanding this, the tongue retained its heavy coating, the anorexia continued, and no abatement of the respiratory difficulties was to be attained by any remedy. Every known remedy was applied by me, as had been done by Dr. Kretszchmar before me. Narcotics, expectorants, anti-spasmodics, stimulants, such remedies as act upon the alimentary canal, digitalis for the heart, all to no avail. The iodide of potassium was given to the extent of a drachm a day, with no effect except to increase somewhat the expectoration. On one or two occasions, when there was a slight elevation of temperature, quinine was exhibited, but to no purpose. Once, indeed, at the suggestion of a student whom I had taken with me to see the case, I prescribed a grain each of calomel and aloes in a pill, three times a day, with quite well-marked temporary relief, but a relapse soon occurred. He was advised to enter the Long Island College Hospital. After leaving that institution he transferred himself to the care of Professor Armor, who tells me that his condition is the same to-day that it was a year ago. A serious lesion of some other viscus was suspected in this case, but the suspicion was never confirmed.

No. 3.—Miss N., æt. 38, Ire.; was a healthy woman up to five or six years ago, when she began to have asthmatic attacks. They have been associated with a slight bronchitis. She was troubled more in summer than in winter, and the dyspnœa was greatly aggravated at night. On her first appearance at the dispensary, Sept. 5th, 1877, she was observed to be a rather fleshy woman, with a well-developed chest. There was no sign of emphysema. The chest was normally resonant on percussion and there were a very few sibilant râles. The prescription was: Take of potass. iod., 2 drachms; liq. potass. arsen., 2 drachms; aquæ ad 3 ounces; to take a teaspoonful four times a day.

Sept. 10th the dyspnœa was considerably relieved. The treatment was continued. Sept. 21st respiration was easy night and day. She said she had not felt so well for years On Oct. 1st she had caught

cold and had rheumatic swellings of her extremities. There was also some return of the asthma, but not nearly so severely as before. She was put on treatment for the cold—viz, opium, capsicum and cinchona. At the end of a week the rheumatic pains had disappeared, but there was some return of the asthma. As the Fowler's solution had previously given rise to some œdema of the face, it was now given in diminished doses, while the dose of iodide was increased. She improved rapidly, and did not find it necessary to come again till Feb. 28th, 1878, when she had a return of her trouble in a mild form.

On similar treatment to that previously used, she did well up to the 26th of August, 1878, when she returned, saying that a few days before the dyspnœa had returned. Examination of the chest showed the same signs as at first, particularly prolonged expiration, accompanied by sibilant râles. I now gave her the iodide alone in 7½-grain doses three times a day. She has not returned since, and I learn on inquiry that up to the present time she has been very well, with only occasional slight manifestations of her old trouble. In August I examined the chest carefully, and did not detect any signs of emphysema, and none of bronchitis, unless the râles mentioned above are to be considered signs of that disease. The important points to notice about this case are, first, the slight evidence of the existence of bronchitis and emphysema; second, that the decrease in the quantity of arsenic and increase in the quantity of iodide of potassium did not lessen the efficacy of the mixture. Nor was it rendered less efficacious by the final omission of the arsenic, the iodide alone sufficing to relieve the symptoms.

No. 4.—An Irish laborer, 55 years old; had been suffering from asthmatic attacks at intervals for several years. The paroxysms are most frequent and severe in summer. Physical exploration showed a large thorax, hyper-resonant on percussion. The area of cardiac dullness was extremely limited; the apex beat and cardiac sounds were very weak. There was prolonged expiration, with dry rales. The prescription was: Take of potassii iod., 3 drachms; aquæ, 3 ounces; mix; to take a teaspoonful three times a day. He continued to return at intervals for about two months. The medicine was not changed. The improvement was constant.

No. 5.—An Irish laborer, 50 years old, has been troubled with a cough and dyspnœa for two years. The dyspnœa is greatest at night, and the trouble is always increased by catching cold. The dyspnœa is paroxysmal. The cough is accompanied by very little expectoration. He had the round, barrel-shaped, immovable chest of emphysema. The percussion note was vesiculo-tympanitic. The apex beat was lost, and replaced by a pulsation in the epigastrium. The expiration was pro-

longed, and accompanied by dry râles. He was given 7½ grains of iodide of potassium, dissolved in water, four times a day. He returned after a few days, saying that the dyspnœa was relieved, though the cough was as bad as ever. The bromide of potassium was added to the mixture.

This was a well-marked example of emphysema, which we could not hope to cure with drugs. It illustrates well, however, the power of the iodide to relieve the dyspnœa of asthma. It also illustrates the necessity which frequently exists of giving other agents to relieve the cough.

No. 6.—An Irish woman, over 40 years old. She has complained of a cough, with dyspnœa, at intervals, for six years. Her health is good otherwise. She is nursing a baby 18 months old. For the last two or three weeks the cough and dyspnœa have been very bad. She had the signs of bronchitis, with numerous dry râles, sibilant and sonorous. Take of potassium iodide, 2 drachms; aquæ, 3 ounces; mix; to take a teaspoonful every three hours. When she returned, two days later, the dyspnœa, which had been considerable, was relieved. The sibilant and sonorous râles had disappeared. The moist râles of bronchitis remained. Five grains of the chloride of ammonium were added to each dose of the mixture. She improved rapidly under this treatment, and at the end of three weeks the cough was so much better that she was put on the iodide of iron, as a tonic, combined with sanguinaria. She did not return again.

No. 7.—On the 10th of June, 1878, as I entered my department of the dispensary, I found a man half lying, half sitting on a bench, supported by his wife, and evidently suffering from the most intense dyspnœa. He was a Scotchman, 56 years old, a rigger by trade. He was a stout, muscular man, of medium height, and had always been perfectly well till three days before he came to me. He had been in the rigging of a ship, working hard, and while perspiring freely came ashore and lay down on the sidewalk near the opening of a cellar. As he lay he could feel the draft from the cellar upon his back. He fell asleep, and, on waking, felt a sense of oppression in his chest. This soon increased to a terrible dyspnœa, which had lasted for three days when I saw him. The chest was expanded, moving little, though the respiratory muscles were contracting actively. Percussion gave a hyperresonance. On auscultation the vesicular murmur was inaudible. It was replaced by loud dry râles, heard most during expiration, which was prolonged. The short cough was accompanied by no expectoration. There was no fever. He was given 7½ grains of the iodide of potassium every four hours. I subsequently saw him at his home, and caused him to continue the same medication. The dyspnœa was relieved rapidly, and he was able to go to work again in a few days.

No. 8.—An Irish woman, 53 years old. Had been suffering a long time from asthmatic seizures. There was prolonged expiration, with mucous and dry râles. She was given five-grain doses of the iodide four times daily, with the effect of relieving her dyspnœa. She was then put on a mixture of iodide and bromide of potassium, and was subsequently lost sight of.

No. 9.—Mrs. D., æt. 35, Ire. She has been troubled with a cough and dyspnœa for four or five years. She has six children, the youngest 13 months old. She has less of the paroxysmal dyspnœa when pregnant. She has a well-formed chest. Percussion about normal. Prolonged expiration. Sibilant and sonorous rales. The dyspnœa and dry rales being well marked, she was ordered 7½ grains of the iodide, in water, four times daily. She returned in twenty days, saying that she had been much better while she took the medicine, but since stopping it the dyspnœa had returned. It was repeated, and she did well for twelve days more. The prescription was again repeated, and she did not return.

No. 10.—Mrs. M., æt. 60, Ire. The patient complained of an obstinate cough of long duration, with "whistling in the chest" at night. The cough was accompanied by a viscid, starchy expectoration. She also had obstinate constipation. I have no note of the examination of her chest. She was ordered 7½ grains of the iodide of potassium, four times daily, and a cathartic pill. Three days later the dyspnœa and cough had both diminished. The treatment was continued. She was seen once after this, and some stimulating expectorants (sanguinaria and tolu) added to her mixture, while the quantity of iodide was diminished.

This completes the list of cases that I have to present. I have seen many more, but the histories are incomplete, or else the iodide of potassium has been combined with other drugs, so that its action cannot be determined.

The merit of my list is that it is made from records which I had never expected to publish, and which were therefore written by an unprejudiced hand. This is my apology for the meagreness of the details, particularly in regard to the previous histories and physical exploration. That they were all well-marked cases of asthma I can vouch for, as I take considerable pains in the examination of my dispensary patients. They are none of them cases of pure nervous asthma. That they all partook of the nature of the so-called nervous asthma there can be no doubt. For when the notes were made I was a firm believer in the theory of bronchial spasm, and would not have recorded any case as one of asthma which did not present the signs which are supposed to indi-

cate spasmodic contraction of the bronchial tubes. The important point, which involves no theorizing, is, that in all but one the exhibition of the iodide of potassium was followed by the subsidence of the dyspnœa. And in that one (No. 2) it was efficacious in his first attack, and only failed in the second attack, when everything else failed too. I have found five to seven grains a sufficient dose, as a general thing. I usually give it four times a day, the last dose just before retiring for the night.

DISCUSSION.

Dr. S. G. Armor: In the treatment of asthma, the iodide of potassium is *the* remedy. But there is a class, in which there is an inflammatory element, that not infrequently resists that treatment. For these he is in the habit of prescribing a preliminary treatment of divided doses of the bichloride of mercury, one-sixteenth to one-twentieth of a grain, for two or three weeks. Under this drug the exudation becomes less viscid and tenacious, and the subsequent exhibition of the iodide of potassium becomes more efficient. Dr. Armor gave an account of two very stubborn cases, the cure of which was brought about under this plan.

Dr. S. Sherwell: The iodide of potassium treatment was not at all a new one to him. He had for a long time used this remedy, in laryngeal and bronchial affections, where a stimulant action upon the mucip-arous glands was desired. A flow of mucus is caused, which washes away the tough secretion which narrows the air-passages. Large doses are not always required.

Dr. P. H. Kretszchmar: The value of chloral in nervous asthma is marked. Two cases lately under his charge had been greatly relieved by giving this drug during the paroxysm. He gave thirty-grain doses about every two hours.

Dr. L. C. Gray: Asthma is a nervous disorder, and will be likely to respond to the same drugs and combinations of drugs that have been found efficient in other nervous affections. As chloral and bromide of potassium had been found pre-eminently useful in epilepsy, the use of a similar combination is worthy of trial in asthma.

Dr. E. R. Squibb entered a plea for a more correct terminology in respect to drugs. The terms bichloride of mercury and chloral hydrate had been used in the discussion, instead of the mercuric chloride and chloral; the potassium salts had been called salts of potash, etc. It will be interesting to have further parallel observations with iodine and potassium singly, as well as the iodide of potassium, to de-

monstrate whether it is the iodine that works the cure, or the potassium, or both combined.

Dr. Westbrook: The use of the iodide of potassium in asthma is not new, certainly, but it is very seldom that the drug is used *alone*, and the results put on record. The tendency of the present day is to eliminate asthma from nervous disorders, and to regard it as a lesion of vascularity. With one exception, his cases of asthma have been non-nervous in character. In reply to Dr. Squibb, Dr. Westbrook gave it as his opinion that the combined action of iodine and potassium are the efficient agents, rather than either of them singly.

BROOKLYN PATHOLOGICAL SOCIETY.

Regular Meeting, January 23d, 1879.

The President, Dr. F. W. Rockwell, in the chair.

MICROSCOPICAL COMMITTEE.

The specimen presented by Dr. Otterson at the last meeting was a case of placentitis.

The kidneys presented by Dr. Wallace, of St. Peter's Hospital, were *granular contracted kidneys.*

TUMOR OF BREAST.

Dr. Wackerhagen presented the specimen, with the following history: Mrs. C., æt. 37 years, the mother of one child, 13 years old. No miscarriages. Menstruation regular. About five months ago a small tumor appeared in the right breast. It was the seat of occasional sharp pain. The general health had gradually deteriorated since the appearance of the tumor. There was increasing anorexia and emaciation, with great depression of spirits. The entire breast was removed, January 19th, with the assistance of Drs. Welton and Anderson.

Regular Meeting, February 13th.

The President in the chair.

ANEURISM OF ARCH OF AORTA.

Dr. Segur exhibited specimens, with the following history:

C. B., an Irish laborer, unmarried. He worked on the concrete pavement up to last August. When admitted he had cough and difficulty of breathing. No other symptom. Signs: The right chest, both anteriorly

and posteriorly, had impaired resonance on percussion. Respiratory murmur weak, but everywhere present. In consultation with Drs. Rushmore and Martin, made the diagnosis of chronic pleurisy. Dr. Rushmore had some suspicion of the existence of an aneurism. The bromide of potassium was given to enable us to make an examination of the larynx, but we could not succeed in viewing it. He died in a few days. *Post-mortem:* The right pleural cavity contained two quarts of turbid fluid and a large quantity of lymph. The lower portion of the lung was solid and sank in water. Bronchial glands enlarged. An aneurism of the ascending and transverse arch, unruptured. Atheromatic degeneration of aorta, in patches. Liver enlarged; kidneys normal. The induration of the lung was thought to be chronic. Was believed to have had syphilis. In answer to questions, Dr. Segur stated that the pulse had not been noticed during life. The other arteries had not been examined *post mortem.*

CYST IN SUBMAXILLARY REGION.

Dr. H. N. Read presented a cyst with the following history:

A German woman, 30 years old. At the age of 15 years she noticed a swelling in the right sub-maxillary region. It slowly increased. Three years ago, after using a mouth-wash, it discharged a substance resembling oatmeal into the cavity of the mouth. This discharge soon ceased and it continued to enlarge. Before the operation it appeared in the right submaxillary region of about the size of an orange, apparently extending only to the mesial line, while a similar but smaller tumor was found in the left submaxillary region, also extending to the submaxillary line. On cutting down and attempting to enucleate, what had seemed to be two growths was found to be but one. It was removed with difficulty, a small opening being made in the floor of the mouth. The cyst contained a pasty substance with a fæcal odor. In seven days the opening into the mouth healed, and the entire wound closed in twenty-two days.

VESICAL CALCULI.

Dr. P. L. Schenck exhibited a calculus removed by him at the Kings County Hospital.

History.—E. B., aged 14, U. S. Symptoms were first noticed when he was four years old. He has been troubled more or less since. Has had occasional retention of urine, generally after some unusual exertion. There is no history of cystitis. General health always good, the only symptom being frequent micturition. The calculus was removed February 13th, by the median operation. It is of an irregular, ovoid shape. The long diameter, 1½ inches; the short diameter averages five-eighths of an inch; weight, 179 grains. It consists of two distinct

portions, two-thirds of a black color, the hard oxalate of lime, to one end of which a soft, light, phosphatic deposit has been added. A portion of the latter was broken off to make its extraction easier.

This makes the seventh case I have reported to the Society of caculus removed by the median operation. In presenting some of the cases, in 1876, I remarked the greater desirability of the median operation, regardless of the size of the stone, at the same time stating that I did not believe the crushing of the stone in the bladder to be an undesirable procedure; and also that I believed the ability of the bladder to withstand manipulation had been underestimated. This same idea has since been fully elaborated by Dr. Bigelow, of Boston, in his monograph, "Lithotrity at One Sitting," and has been pronounced by Dr. Van Buren a great discovery.

CARCINOMA OF PANCREAS.

Dr. Westbrook presented the stomach and duodenum, with liver, spleen and pancreas attached, from a case in which he had made the autopsy for Dr. McClellan. The patient, an old gentleman, æt. about 70 years, had begun last June to complain of a pain in the umbilical region. The pain was associated with a gradually increasing debility, and the final development of a cachectic condition. Tonics and cod-liver oil were administered, and agreed well with the alimentary canal. A month or six weeks ago a tumor was found projecting from beneath the right costal cartilages. Another tumor was felt in the right lumbar region. At about the same time the man became intensely jaundiced, and remained so till his death. The tumor in the hypochondriac region continued to enlarge slowly. It was supposed to be the gall-bladder. A few days before death he became feverish, coughed and expectorated a yellowish green sputum. On the 12th February he became suddenly collapsed and died. At the autopsy, made on the following day, the head of the *pancreas* was found to be enlarged by what appeared to be a carcinomatous growth. The growth had surrounded the *ductus communis choledechus*, which was dilated above the constriction to the size of the *vena cava*. The *pancreatic duct*, whose opening was about one inch from that of the bile duct, was patulous. The papilla, at its extremity, was three-fourths of an inch in length. The body of the pancreas did not seem to the naked eye to be involved. The *gall-bladder* was enlarged. Its length was about 7 inches. The *hepatic ducts* were greatly dilated and the entire liver injected with bile. Throughout the substance of the *liver* were carcinomatous nodules the size of a cherry. The *lymphatic glands* of the lesser omentum were enlarged. The stomach contained an enormous blood-clot. The *spleen* was wrinkled, as if recently depleted. The other

abdominal viscera and peritonæum unaffected. The *pleuræ* were studded with minute nodules, either tubercle or cancer. The lower portion of the right *lower lobe* was hepatized. It was stained a greenish yellow, and a darker greenish mucus could be pressed from the bronchi. The remainder of the lower lobe was congested.

An account of a post-mortem examination of a very obese man, a patient of Dr. A. Ross Matheson, will be fully detailed at a subsequent date.

The Curator would be pleased to receive correspondence in regard to the exchange of microscopical slides. Address Dr. E. S. Bunker, 280 Henry Street, Brooklyn.

☞ The Secretary requests members presenting specimens to present therewith a *written* account of the history and pathological appearances.

BENJ. F. WESTBROOK, *Secretary.*

BROOKLYN ANATOMICAL AND SURGICAL CLUB.

Stated Meeting, January 20th, 1879.

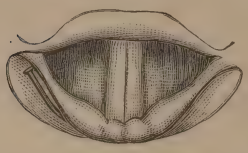
The President, Dr. L. S. Pilcher, in the chair.

PIN IN THE LARYNX—REMOVAL WITH LARYNGEAL FORCEPS.

Dr. T. R. French presented a pin which had been removed from the larynx, with the following history:

Female, aged 28 years. While playing with the baby at six o'clock on the evening of December 25th, 1878, felt a sharp pain in the right side of the neck. At first she could not imagine the cause; but remembering that she was in the habit of holding pins in her mouth, she believed she must have breathed in or swallowed one, although not conscious of having had one in her mouth at the time. Three hours after the accident she was brought to the office of Dr. F., when she complained of constant but not severe pain, except during the act of swallowing—then it was acute.

With the aid of the laryngoscope the movement of the right vocal cord was seen to be somewhat impeded during inspiration. During quiet respiration nothing of a foreign nature could be seen; but as soon as the voice was sounded, the aryteno-epiglottidean fold of the right side, moving toward the median line, uncovered the pin, lying in the hyoid fossa.



The head was embedded in the tissue covering the thyroid cartilage; the point and half the length of the pin was buried in the substance of or tissue about the arytenoid cartilage of that side.

An attempt to grasp the pin was immediately made with Türck's tube forceps, but was unsuccessful. The forceps were again introduced and the pin grasped, but it was so firmly impacted that the forceps did not retain their hold. The third attempt was entirely successful—the pin being grasped, dislodged and brought away without injury to the parts, as far as could be seen.

The relief from pain was immediate and no subsequent trouble has been experienced.

LITHOTOMY "EN DEUX TEMPS."

(Presented at the November Meeting.)

Dr. Charles Jewett presented a vesical calculus which he had removed, with the following history:

J. L., an ill-nourished, anæmic boy of ten years, had presented the symptoms and signs of vesical calculus. In August last was subjected to lithotomy by the median method of Allarton; on entering the bladder no stone could be felt by the finger; at the fundus of the bladder, as far up as the finger could reach, there was apparently an opening into a diverticulum; a long probe passed in this direction, beyond the reach of the finger, struck the calculus. Attempts to seize it with forceps were unsuccessful; after several fruitless attempts to seize it, it was deemed best to desist, owing to the development of severe shock; subsequent peritonitis prevented further interference for a time.

In October following the bladder was again explored; the boy's general health had become much better than at the time of the first operation; the wound made at that time had degenerated into a urinary fistula; this was now dilated; a probe passed through it struck the stone, now lying at the neck of the bladder; the fistula was further enlarged by incisions in the median line, the neck of the bladder slightly nicked and the stone easily removed with the forceps. The patient made a good recovery, with no complications, the temporary fistula closing completely. The calculus was chiefly phosphatic, with a nucleus of uric acid; its weight 210 grains.

RUPTURE OF THE UTERUS DURING LABOR: THREE CASES.

CASE 1.—Reported by Dr. Z. T. Emery, as follows: Was called July 16th, 1878, to see Mrs. R., native of Ireland, aged 35 years; tenth pregnancy; two miscarriages, two funis presentations, with death; five living

children. When first seen by me had had severe pains for two hours. Examination showed the chin presenting low down in the hollow of the sacrum, and so firmly held there as to resist all efforts to correct the position; forceps were then applied ineffectually; an attempt was then made to turn and deliver by the feet; a hand was introduced, but the wrist was so strongly grasped between the pelvic rim and the head, that the whole arm was benumbed, and the effort was unsuccessful. Dr. W. B. Matson, coming to my assistance, repeated the attempt, but was unsuccessful. I then again introduced my own hand. I found the contractions much feebler, and my hand passed directly into the peritoneal cavity, as I judged from the peculiarly smooth and glossy surface felt, and by the thinness of the structure between my hand and the surface of the abdomen; hastily withdrawing my hand from that place, I passed it up to the fundus of the uterus, grasped a foot and easily brought it down. Delivery was finally accomplished, but with great difficulty, owing to a small pelvis and a large fœtus; child was dead when delivered; immediately after delivery, the uterine cavity was cleared of its contents, but no placenta was found; uterus remained relaxed, and all attempts to secure its complete contraction were fruitless; death took place six hours after the commencement of labor.

Autopsy, six hours after death.—Peritoneal cavity filled with blood; placenta found lying in the epigastric region; uterus presented a transverse rupture, in front and to the right, at a point two and a half inches above the os; numerous slits ran off from the main fissure, giving the edges a jagged appearance; a section of the uterus showed a marked disproportion in the thickness of the walls of the body (two inches) and of the neck (one-half inch).

Case 2.—Reported by Dr. G. W. Baker. Mrs. S., native of Germany, aged 42 years, a healthy, well-formed woman; third pregnancy. From the third month of her pregnancy complained much of a sense of painful tension in the front and lower part of abdomen; this continued to increase and at times seemed almost unbearable; late in her gestation the anterior abdominal wall seemed thinned at its most prominent point. Taken in labor March 12th, 1873; head presented in the first position; os had become dilated, and the head partially engaged in the superior straight, with regular and moderate expulsive pains, when, during a pain, she suddenly screamed, and complained of great distress just above the symphysis pubis; pains ceased; patient seemed to be suffering from shock; head retained its advanced position; forceps applied and speedy delivery was effected without difficulty; child dead; placenta expelled spontaneously. Examination revealed a rupture, about six inches long, in the anterior wall of the uterus, extending into the vagina; uterus contracted well and

the external hemorrhage was moderate; patient developed a state of collapse and died thirty-six hours after delivery.

Dr. B. regarded the cause of rupture in this case to have been thinning of the uterine wall from the pressure due to a tense abdominal wall; the atrophy thus produced had so weakened the uterine tissue that it could not withstand an ordinary labor.

CASE 3.—Reported by Dr. G. R. Fowler. In this case a rupture of the posterior wall and cervix, involving the cul-de-sac of Douglas, occurred while the attempt was being made to perform podalic version. The case was one of placenta-prævia, and a midwife, in whose charge the case had been, had allowed the patient to become almost exsanguinated before summoning assistance; the patient was under the influence of ether at the time, and, it being feared that she would perish before delivery could be accomplished, a powerful effort was made to rapidly dilate the cervix, the fundus being supported by the other hand; suddenly the rigid ring gave way, and the delivery was promptly effected. In re-introducing the hand to turn out the clots, it was discovered that it had passed into the peritoneal cavity through a rent in the posterior wall of the uterine body and neck. The patient was kept in a semi-narcotized state for nearly fourteen days, suffering, meanwhile, a moderate peritonitis; she finally made a complete recovery.

REMARKS.—The subject of rupture of the uterus was reviewed by Dr. Emery, the facts being classified as follows:

Frequency of Occurrence.

Author.	No. of Ruptures.	No. of Labors.	Proportion.
Burns			1.940
Ingleby			1.1300
Churchill			1.1331
Lehmann			1.2433
Jolly	230	782,741	1.3401

Seat of Rupture.—Cervix, body and fundis, decreasing in frequency of occurrence in different portions of the uterus as above named.

Causes.—Disproportion in relative thickness of the uterus, together with unusual obstructions, most frequent cause; deformity of pelvis alone, especially if only slight; malpresentation; mechanical injuries—*i. e.*, the result of blows, falls and the like; unskillful interference; protracted and ineffectual contractions; incautious administration of ergot; degenerative tissue changes.

Prognosis.—Comparative results of various treatments.

JOLLY.

Treatment.	No. of Cases.	Deaths.	Recoveries.	Per cent. Recoveries.
Expectation	144	142	2	1.45 per cent.
Extraction.....	382	310	72	19 "
Gastrotomy.	38	12	26	68.4 "
Total	564	464	100	17.5 per cent.

TRASK.

Treatment.	No. of Cases.	Deaths.	Recoveries.	Per cent. Recoveries.
Expectancy.	115	88	27	23.4 per cent.
Extraction....	207	130	77	32.7 "
Laparotomy.....	29	7	22	75.8 "
Total	351	225	126	35.9 per cent.

Dr. Harris, of Philadelphia, has collected reports of thirty cases, treated by laparotomy, with the saving of twenty-one women and one child.

The following is Dr. Playfair's recapitulation:

1. If the head or presenting part be above the brim and the fœtus still in utero, forceps, turning or cephalotripsy, according to circumstances.

2. If the head be in the pelvic cavity, forceps or cephalotripsy.

3. If the fœtus have wholly or in great part escaped into the abdominal cavity, gastrotomy.

——Intemperance.—In the Boston *Medical and Surgical Journal* for January 10th, 1878, it is stated, on page 54, that the French have passed the following law: "Every person who may be condemned by the police twice for the crime of open drunkenness, will be held incapable of voting, of elective eligibility, and of being named for the jury or any public office." Such a law here, and a good license system, would go very far towards controlling the vice of intemperance.

——The Diagnosis of Drunkenness.—Dr. Macewen, of Glasgow, has formulated the following rule: Any insensible person, who, having been left undisturbed for from ten to thirty minutes, has contracted pupils, which dilate when he is shaken, without any return to consciousness, and then contract again, is suffering from alcoholic coma. If this test holds good, it will tend to decrease the number of sensational editorials, etc., under the caption: "Drunk or Dying," which so frequently appear in the English papers.

Ἀσκληπιὸς ὁ Σωτὴρ

Χαρμα μέγ' ανθρωποισι, κακων θελκτῆρ' οδυναων.

Hymns of Homer, No. XVI.

PROLIFERATIONS.

——Members of the Society who wish to present papers will oblige the President by communicating with him, stating the subject fully, the time required for presentation, and when the paper will be ready.

——A Vaccination Fund, for 1879, for Brooklyn, has been approved by the Mayor, and is now in process of utilization by the Health Board. This grant, not to exceed five thousand dollars, was made for purely preventive and economic reasons, and not because of a "scare," or an impending epidemic. It is difficult to exaggerate the good influences of this prudent and beneficent step. It is not too much to hope that this may be the entering-wedge for a permanent fund and organized corps for vaccination.

——Vaccination.—The brief and modest report on this subject, in our February number, is quoted pretty fully by the *Detroit Lancet*, Feb., with the following complimentary endorsement by its editor: "This study is just as valuable to all large towns and cities as to Brooklyn."

——The Hydrostatic Method of arresting uterine hemorrhage is brought forward by an Irish practitioner, who is willing to bet $500 on the universal efficacy of his plan—that he can stop any kind of uterine hemorrhage in ten to twelve seconds.—*Pacific M. and S. Journal*, Jan.

——Calomel again seems to be coming to the front. The New York letter to the *N. C. Med. Journal*, January, states that Dr. Leaming, who was himself attacked by a pleuro-pneumonia, was treated by large doses —say 30 grains—of this unfashionable commodity. He not only survived, but the severity of the disease appeared to be mitigated promptly after this treatment. The eye-men, also, are throwing in large doses when iritis is impending after cataract.

——To Metrical Physicians.—The Metric Club, of 188 Clark Street, Chicago, sell for six cents a dose-book, shaped so as to slip into the ordinary visiting list. It will be found convenient by all of the new-measure-men.

——Relief to Distressing Symptoms of Cancer of Pylorus by Codeia.—New Remedies: Austin Flint says that codeia in one-grain doses so completely stopped the vomiting and pain of the disease that the patient thought the tumor was decreasing in size.

——Abdominal Section after Rupture of the Uterus.—If any member of this Society has performed the above operation, or has knowledge of any case of the kind, the facts would be acceptable to Dr. R. P. Harris, 713 Locust Street, Philadelphia, who is now collecting material concerning rupture of the uterus.

——Improved Extract of Malt, consisting of the soluble constituents of the best Canada barley meal (the Trommer Extract of Malt Company, Fremont, Ohio). We find that this extract converts starch into glucose and dextrine rapidly and in large quantity. In flavor it is excellent, and we have therefore no hesitation in praising it highly. Malt extract seems to be steadily increasing in favor for diseases involving impaired nutrition; but its preparation requires great care, as it is easy, in making it, to destroy its activity as a starch-converter, and so render it nearly useless. The malt extract is supplied in various forms —for example, the simple, for nutrient purposes, with cod-liver oil (which it disguises pleasantly), with the hypophosphites, and with iron. —*Lancet*, Jan. 25th, 1879.

——Dangers to Health, a Pictorial Guide to Domestic Sanitary Defects, by T. Pridgin Teale, M.A., Surgeon to the General Infirmary at Leeds. London: J. & A. Churchill, New Burlington Street. Leeds: C. Goodall, Cookridge Street. Price, 10*s*. This admirable production of the eminent surgeon of Leeds is worthy of a large circulation on this side of the ocean. It is illustrated with 55 full-page lithographs, many of them colored.

——Index Medicus, a monthly classified record of the current medical literature of the world, compiled under the supervision of Dr. J. S. Billings, Surgeon U. S. A., and Robert Fletcher, M.R.C.S. The first number of this marvel of industry and skillful compilation has been received. We commend it to specialists, and every one desirous of keeping a current record of all the medical literature of Europe and America. Sample copies will be sent on application. The address of probable subscribers is desired from the friends of the enterprise. Address, F. Leypoldt, Publisher, 37 Park Row, New York. Our journal for December is quoted under the following abbreviated title: "*Proc. M. Soc.*

County Kings, Brooklyn." The *Index* is itself clearly indexed by a table of contents on the first page of its cover—the very best position for it.

——At the late meeting of the State Medical Society, Drs. Prout, Wyckoff, Chapman, Hopkins, Rushmore and Rockwell attended as delegates from this Society, and Drs. Squibb, Hutchison, Bell and Hutchins, permanent members. Drs. Prout and Mathewson were elected permanent members.

——The Children's Hospital, in Albany, a building of brick and mortar, gives to its patients partial tent-ventilation. The method, which is very simple, and was adopted after a good deal of consideration, and with some doubt as to its practicability, is a suggestion of Dr. J. Swinburne. It consists simply in having large window-spaces and filling nearly two-thirds of each with properly arranged frames, on which is fastened ordinary, rather thin unbleached muslin. The frames are so arranged as to slide, and when it is very cold three thicknesses of cotton cloth, two or three inches apart, can be brought into the window space. The wards run east and west, and are fully exposed to the north, northeast and east winds, and partially to the northwest. The rains beat on the cloth. One-third of each window is occupied by glass. The day on which the writer visited the hospital was very mild, and the glass windows were open, consequently the efficiency of the method could not then be tested; but he was assured that the temperature was very easily regulated, and that the quality of the air in the wards was always good. The condition of the patients was certainly good.

——Asthma and Iodide of Potassium Spray.—A man, thirty years old, had for eight months had almost daily asthmatic attacks, bronchitis for five years. He was reduced to a pitiable condition, having, at the time the treatment began, three or four attacks each day. After the diligent use of this spray for eight days they had almost entirely ceased. Their return has been prevented since that time, nearly eighteen months ago, by the use of the spray—periods of inhalation short, but frequently repeated. Solution contains one part to twenty of water.—*Canada Lancet.*

——George Gilfillan, M.D., died at the age of 82 years, at 212 Clinton Street, in this city. He was a native of the north of Ireland, and had lived here about 50 years, and had been in active practice until about eight months ago. He was a graduate of the College of Physicians and Surgeons, New York, in 1834, and became a member of the County Medical Society in 1836. The cause of death, which occurred suddenly on the morning of February 5th, was assigned to an apoplectic seizure. Dr. G. was never married.

——Dr. Archibald F. Mudie died February 18th, at St. Peter's Hospital, of pulmonary consumption. He was a native of New York State; born about thirty-seven years ago; a graduate of the College of Physicians and Surgeons, New York, 1860; came to Brooklyn in 1870.

——Wm. H. Gardiner was born in New York City, December 28th, 1822. His father, Nathaniel Gardiner, an extensive and successful merchant, left New York, on retiring from business, and went to New Haven for the purpose of educating his two sons. The elder was graduated there; but the younger, the subject of this notice, returned, at the close of his second year in college, to New York, with his family, and, entering the University, was graduated in 1843. The following year he spent in Europe. On arriving home he entered the office of Dr. Mott, joined the medical class of the University, and received his diploma in 1847. Soon after he commenced practice in Brooklyn at the corner of Sands and Jay Streets. Subsequently he moved to Harrison Street, to Court Street, and finally to the corner of Clinton and Livingston Streets, where he resided the last ten years of his life. At the inception of the Central Dispensary he was one of its physicians, and for several years prior to his death he was a member of the Physicians' Mutual Aid Society. In 1851 he joined the Kings County Medical Society.

In 1862 he married Miss Rebecca Gibson, who survives him. This marriage proved childless.

His father dying in 1856, the doctor was left with a fair competency, and no longer felt the necessity of pushing his professional fortunes. This ease in his circumstances was enhanced after his marriage, when a large tract of unimproved property in the upper part of New York City demanded his care. Eventually the estate which promised so much proved a quicksand that engulfed all his available funds. Throwing good money after bad, in the vain effort to save what he could in the general wreck, induced a settled melancholy and nearly dethroned his reason. This mental depression, reacting on a bodily frame never of the strongest, gave an increased impetus to the morbid action long active in his heart and lungs, that after two years' suffering ended the struggle, January 7th, 1879, in the 57th year of his age.

Dr. Gardiner was a man of sterling integrity, of strong purpose, of untiring industry, and of good executive ability. In every sphere of life truth and honor were his watchwords; sham and fraud received no countenance.

Whilst engaged in practice, he won the esteem of his patients by his devotion to their welfare, and their gratitude by the issue of his treatment. The poor and the rich equally shared his patient and careful attention.

The doctor's ancestor, Lyon Gardiner, fills a large space in colonial history. He built the fort at Saybrook, took part in the Pequot wars, wrote a history of the same, bought an island that now goes by his name, and has ever since remained in the family—an island where Kidd is supposed to have buried his treasures—and took an active part in the affairs of East Hampton, where he resided the latter part of his life, and held many public offices of trust.

In the History of Long Island appears the following brief synopsis of his life:

"Of Lyon Gardiner, Governor Winthrop, in his journal, says, 'that on the 29th of November, 1635, there arrived a small barque of twent-five tons, sent by the Lords Say and Brook, with one Gardiner, an expert engineer or work-base, and provisions of all sorts, to begin a fort at the mouth of Connecticut River.' In Trumble's History it is said 'that Lyon Gardiner, who had been procured to superintend the fort at Saybrook, and who afterwards commanded the garrison, was a gentleman of respectability and worth.' He was a native of Scotland, and had served as a lieutenant in the British army in the Low Countries. He belonged to the republican party, with the illustrious Hamden, Oliver Cromwell, and others of the same spirit. He continued in the command at Saybrook till the fall of 1639, when he removed to and took possession of the island, which he had purchased in the spring. On the settlement of East Hampton, ten years thereafter, he removed there, where he continued to reside. He was chosen a magistrate, and transacted various public business till his decease in 1663. His son David, born at Saybrook, April 29th, 1636, is generally believed to have been the first white child born in Connecticut, as his daughter Elizabeth, born September 14th, 1641, was the first child born of European parents within the limits of Suffolk County."

E. N. Chapman, M.D.,
J. C. Snively, M.D.,
Committee.

——The Regular Monthly Meetings of the Medical Society of the County of Kings are held at 8 P. M. on the third Tuesday of each month at Everett Hall, 398 Fulton Street.

The March meeting will be held on the 18th, at which there will be presented the following papers:

Chloral Inebriety, by Dr. J. B. Mattison.

A Practical Demonstration of the Treatment of Hip Joint Disease, by Dr. J. C. Hutchison.

Communication from the New York County Medical Society, on the adoption of the Metric System, by Dr. F. J. Bumstead, President, Dr. E. Seguin and others, Committee.

——New Members.—At the February meeting J. J. Corcoran, M.D., Univ. City of N. Y., 1875; E. F. Lindridge, M.D., Bellevue H. M. Coll., 1875, and O. J. D. Hughes, M.D., L. I. C. H., 1876, were elected members. Drs. H. L. D. Woodruff, 517 Gates Ave., J. M. Harcourt, 302 Clinton St., and J. E. Wade, 10 Kossuth Place, were proposed for membership.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

OFFICERS AND COMMITTEES FOR 1879.

President.....J. S. Prout, M.D., 167 Clinton St.
Vice-President.....C. Jewett, M.D., 310 Gates Ave.
Secretary.....R. M. Wyckoff, M.D., 532 Clinton Ave.
Assistant Secretary.....J. H. Hunt, M.D., 419 Hart St.
Treasurer.....J. R. Vanderveer, M.D., 301 Carlton Ave.
Librarian.....T. R. French, M.D., 72 Greene Ave.

CENSORS.

F. W. Rockwell, M.D. (Senior Censor), 6 Lafayette Ave.
G. W. Baker, M. D., 48 Bedford Ave., E. D. B. A. Segur, M.D., 281 Henry St.
A. Hutchins, M.D., 796 De Kalb Ave. L. S. Pilcher, M.D., 4 Monroe St.

DELEGATES TO THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

(1878 to 1882.)

Drs. J. C. Shaw,	Drs. A. J. C. Skene,	Drs. E. N. Chapman,
J. D. Rushmore,	G. G. Hopkins,	J. S. Prout,
R. M. Wyckoff,	A. Mathewson,	F. W. Rockwell.

Chap. XI, Art. 2, of By-laws: "Any Member elected as Delegate to the Medical Society of the State of New York, who shall be unable to act as Delegate during two successive years, shall be considered to have vacated his position as Delegate."

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION.

Drs. Andrews,	Drs. French,	Drs. Pilcher,
Dodkin,	Garrigues,	Schapps,
F. H. Colton,	Hawley,	Shaw,
Dodge,	Hutchison,	Sherwell,
Fessenden,	Mathewson,	Westbrook.

COMMITTEES OF THE SOCIETY.

HYGIENE.

Drs. T. P. Corbally, J. Walker, W. E. Griffiths, B. Edson, A. W. Ford.

REGISTRATION.

Drs. C. H. Gilberson,	Drs. W. G. Russell,	Drs. R. M. Buell,
W. E. Griffiths,	N. Matson,	R. W. Wyckoff,
J. A. Jenkins,	F. W. Rockwell.	

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ON THE MECHANICAL TREATMENT OF INFLAMMATION OF THE HIP, KNEE AND ANKLE JOINTS, BY A SIMPLE AND EFFICIENT METHOD—THE PHYSIOLOGICAL METHOD—WITH CASES.

BY JOS. C. HUTCHISON, M.D.

I design in this paper to describe a plan for the mechanical treatment of inflammation of the hip, knee and ankle joints, by methods which seem to me to be more simple, effective and agreeable to the patient than those hitherto employed.

It may be stated at the outset that morbid conditions of the joints are, as a rule, essentially chronic, and whether the disease originates in the synovial membrane, the cartilages, bones or investing fibrous capsule, ultimately the morbid action involves all the tissues, so that, without the previous history as a guide, it is often impossible to determine in what tissue the inflammation began. It is to my mind merely a pathological refinement in most cases of joint disease, especially in childhood, to attempt to describe the symptoms indicating distinct pathological states of the individual structures composing a joint. The treatment would be essentially the same, whether one or all of the articular structures are contemporaneously involved.

The indications for the mechanical treatment of inflammation of the joints of the lower extremities are to secure *immobility, extension, the removal of the superincumbent weight of the body, and means of enabling the patient to take open-air exercise.* The accomplishment of these indications, and the use of judicious medication and proper hygienic influences comprehend all the principles of treatment.

Immobility of an inflamed joint, absolute and complete, is a primary and essential condition of its local treatment. The more effectually this is secured, the more rapidly and perfectly the joint recovers its normal condition, and the less danger there is of its being permanently damaged. The greatest obstacle to recovery is friction of the inflamed surfaces. I do not mean a mere limitation of the movements of the joint—such "rest" as is obtained by placing the limb upon a soft bed or pillow—but the perfect fixation secured by a splint or other means, which admits of no motion whatever. I am aware that many excellent surgeons believe that the danger of irreparable structural change and anchylosis of the joint is very great from prolonged fixation. This I am sure is an error. There may be a temporary anchylosis, such as arises from a diminution of the elasticity of the articular cartilages and an enfeebling of the ligaments and the muscles from disuse; but such changes are or need be only temporary, for by careful and steadily increasing use, reparation takes place in all these structures, and after a time they show no defect. I have never seen true anchylosis when the joint has been immovably fixed until the inflammation has subsided, except in cases of extensive destruction of the joint-structures, in which case a cure by anchylosis is the thing to be desired. Exceptional cases no doubt occur, but the anchylosis takes place more commonly when fixation is incomplete, and more or less motion and friction are permitted before the inflammation has entirely subsided.

The object of extension is—(1.) To correct the malposition of the limb. An inflamed joint is never straight; it involuntarily becomes flexed, nor is it possible for the patient to prevent or change this position. The flexion takes place slowly, almost imperceptibly, but surely, even when the limb has been permitted to rest quietly in bed, undisturbed either by the patient or nurse; the degree of flexion depends upon the intensity or the duration of the disease. Every joint, when it becomes inflamed, assumes a characteristic *position*, which it is important to know, not merely as a diagnostic sign, but also as a point which may be made useful in treatment. When the *hip-joint* is inflamed, the thigh is flexed on the pelvis, and as a rule is slightly adducted. The *knee-joint*, when inflamed, is always more or less flexed. In the case of the *ankle-joint* the foot is flexed upon the leg, the heel is raised by the gastrocnemii, and the toes pointed downward. The *improper position* which the joint assumes should be cor-

rected as soon as possible, even when the inflammation is acute; this is important, in order that the different structures of the joint may not be kept in a state of undue pressure, or of inordinate tension, either of which interferes with healthy nutrition, and so conflicts with the curative process. As the joint becomes straightened under the influence of extension, the patient experiences an almost immediate diminution of pain. (2.) By means of extension we also overcome the spasm and contraction of the muscles, which by reflex contraction jam together the inflamed articular surfaces, and is the chief cause of pain in joint-inflammations; but I do not believe it possible, by any amount of extension that can be applied, to separate the inflamed and swollen interior surfaces of the joint, so as to relieve them from pressure and the consequent pain. What we do accomplish by extension is the relief of spasm and muscular shortening, and to quiet the muscles is an imperative therapeutic axiom.

The necessity for securing the beneficial effects of outdoor air, by means of some portative apparatus which removes pressure from the inflamed joint, is now so generally appreciated that we need not urge its importance.

The special methods of meeting the above indications will be described when we consider the treatment of the diseases of particular joints.

HIP-JOINT DISEASE.

The *American Journal of the Medical Sciences* for January, 1879, contains an article by the writer, "On the Treatment of Morbus Coxarius by a New Method of Extension—the Physiological Method—with Cases;" and I propose, on this occasion, to illustrate the method by exhibiting some patients who are now undergoing the treatment, and to show that the various kinds of portative apparatus now in use do not accomplish what is claimed for them. It is my purpose, also, to demonstrate that the "Physiological Method of Extension" is quite as useful for the treatment of inflammation of the knee and ankle joints as it is for morbus coxarius.

For many years Harris, of Philadelphia, and others, treated morbus coxarius in bed, by extension and fixation of the joint with the long splint formerly used for fracture of the thigh, with moderately satisfactory results; and in 1855 Dr. H. G. Davis, of New York, described a new portative apparatus designed to produce extension while allowing motion of the joint, and permitting the patient to enjoy the benefits of outdoor exercise, so important in the treatment of this disease. It was claimed, also, by Davis and his followers, that confinement to bed with the long splint applied fixing the joint, not only impaired the general health, but increased the risk of anchylosis, which would leave the patient in a worse

condition than if left to the tender care of Nature herself. This new method of treatment awakened the interest of surgeons generally, and very soon afterwards Sayre improved or modified Davis' instrument, and, with the enthusiasm of an ardent nature, brought the new treatment prominently into notice, and by papers and lectures did more to secure its general adoption than the originator himself had done. The instruments of Taylor, Vedder, Washburn, and that devised by myself, are also modifications of Davis', designed to accomplish the same indications, viz.: *mobility of the joint with extension.*

Barwell, Andrews, of Chicago, Bauer, now of St. Louis, and Thomas, of Liverpool, believe that the indications for the proper treatment of the disease are to secure *immobility of the joint with extension*, and they have respectively devised very ingenious instruments to accomplish this purpose; while Prof. Hamilton's wire-gauze apparatus was designed merely to secure *immobility of the joint without extension.*

All these appliances are familiar to you, except that of Thomas, of Liverpool, which I will briefly describe. It consists of a flat piece of malleable iron, from three-quarters of an inch to an inch in width, by one-quarter in thickness, which extends from the lower angle of the shoulder of the affected side in a perpendicular line downwards to the calf of the leg. A strap of hoop-iron is riveted to the top of the upright, and nearly encircles the body a little below the axilla; another strap of iron half the circumference of the thigh is fastened to the upright just below the fold of the buttock; and a third, half the circumference of the calf, is riveted to the lower extremity of the upright. The instrument is carefully moulded to the inequalities of the body by means of wrenches, and is well padded and covered with leather. The apparatus having been applied, the patient is allowed to walk on crutches, with a patten on the sound foot, so as to elevate the diseased limb two or three inches from the ground.

This apparatus will not permit the patient to sit down, and renders defecation very inconvenient.

We have, therefore, three classes of portable appliances in use for the treatment of morbus coxarius, all of which, with due respect to the ingenuity of their respective authors, I feel called upon to condemn—(1.) Because they do not achieve the objects for which they are designed. (2.) If they did, they are unnecessarily cumbrous and uncomfortable, and therefore should be abandoned, because the same indications can be accomplished by a method simpler and more comfortable to the patient.

The theory that motion and extension are obtained by the apparatus of Davis and his followers is a great deception. If you notice a patient

wearing Taylor's or Sayre's long splint (modifications of Davis'), those most frequently used here, you will see when he walks the whole pelvis swings, and there is no motion at the hip-joint. This immobilization of the joint a kind Providence has secured, in spite of the efforts of the surgeon to prevent it. You will also observe that there is no extension made by the instrument, as the inventors claim, because the strap, which is designed to produce extension and passes from the ends of the adhesive plaster beneath the extension-bar, is slackened at every step. This I have noticed lately in a number of cases in one of the hospitals of the city of New York, where there is a large orthopœdic ward, under the care of an accomplished orthopœdic surgeon, who uses Taylor's apparatus. The instrument merely transfers the weight of the body from the hip-joint to the perineal band, but the extension is made by the weight of the limb alone.

The apparatus of Andrews, Barwell and Bauer are equally inefficient in securing the objects for which they were designed, viz.: to render the joint immovable, and to produce extension of the limb. Thomas' instrument, by its long leverage, extending from the angle of the scapula to the calf of the leg, has some control over the movements of the joint, but it is unnecessary for this purpose, and, as already indicated, is very inconvenient to the patient, while the wire-gauze apparatus of Prof. Hamilton can have but little influence in producing immobility, because it does not extend far enough above and below the joint.

Why is it then, it may be asked, if the appliances referred to are insufficient to accomplish what is claimed for them, and are deceptive, that so much improvement has been reported from them, when compared with others not having their features? For my own part, I am in the habit of explaining these favorable results by the fact that the use of the instruments devised by American ingenuity has liberated patients from indoor constraint, and enabled them to live and move and exercise in the open air, instead of being treated in bed, as was formerly done; and also from the fact that the principal indications, immobility and extension, are achieved in spite of the apparatus used.

We have already considered the indications for the treatment of hip-joint disease, and also for the treatment of inflammation of the knee and ankle joints. They are—(1.) To secure immobility of the joint; (2.) To make extension; (3.) To take off the superincumbent weight of the body; (4.) To provide means to enable the patient to take open-air exercise; and I desire to demonstrate that they can be accomplished with comfort to the patient and convenience to the surgeon by the simplest expedients.

The method of treating hip-joint disease which I commend to your atten-

tion, after having used it exclusively for the last two years, is illustrated on the little patients before you. To the shoe of the sound limb a steel plate corresponding to the sole of the shoe is attached by upright rods two and a half or three inches in length, so as to raise the foot from the ground; it is the shoe ordinarily used for shortened leg. This elevated shoe and a pair of crutches constitute the apparatus. As the patient stands on his crutches the diseased limb is suspended; the shoe is high enough to prevent the toes of the affected side from touching the ground, and the sole should be covered with leather, to avoid noise when walking.

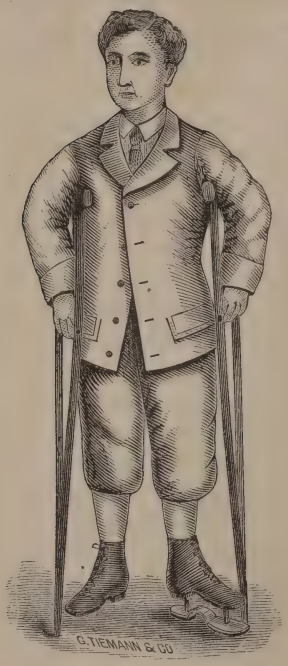

FIG. 1.

FIG. 2.

Here are brief notes of the cases, taken from the records of the Orthopœdic Infirmary. The *first case* is that of Henry S., and the record was made by Dr. A. R. Paine.

He is five years old, and was brought to the Dispensary for treatment February 4th, 1879. His mother states that he began to have trouble in his left hip-joint eight months previously; that he had had pain in the hip and also in the knee from that time to the present, increasing at night, and that for some time he had not been able to walk. An examination revealed the existence of well-marked morbus coxarius, as

indicated by the following symptoms: considerable fullness in the gluteal region; obliteration of the gluteal fold; the thigh slightly flexed upon the body; there is apparent anchylosis at the hip-joint, the pelvis moving with the femur; the effort to move the joint produces great pain; there is also pain in pressing the trochanter inwards and when the foot is jarred. The elevated shoe and crutches were ordered for him.

He was seen a second time February 21st. Has used the shoe and crutches about a week. The first day he tried them he was run against and knocked down, falling, of course, upon the lame hip. He suffered a great deal from the injury, cried all night, and the flexion of the limb was greatly increased; but on getting upon his crutches in the morning, the pain subsided and the limb gradually resumed its former position. Since that time he has had much less pain, and goes about easily and comfortably. March 11th, the mother says the boy is doing "splendidly;" he has no pain day nor night, and the position of the limb is good. The case is before you and speaks for itself. There is every reason to suppose that it will progress satisfactorily.

CASE II.—*Morbus coxarius (third stage). Progressive improvement by the use of the elevated shoe and crutches.*

This little boy, three years old, was brought to the Orthopœdic Infirmary February 14th, 1879, and the record of his case was made by Dr. H. W. Rand.

The parents think the present trouble commenced when the child was six months old. He is tolerably well nourished and gives no history of injury. When he began to creep it was noticed that he favored the right leg. Two months later swelling appeared around the hip-joint, most prominent in the groin, where it was opened by the family physician, discharging a thin yellowish fluid.

Since the child began to walk he has always borne the most weight on the ball of the foot, rarely allowing the heel to touch the floor, owing to flexion of the thigh on the trunk. He complained of very little pain until December 11th of last year, since which time pain has been almost constant and referred to the hip-joint.

When presented at the Infirmary the thigh was flexed on the abdomen, foot inverted, pelvis drawn up on the affected side, nates flattened, and gluteo-femoral crease lowered. Movement of the thigh excited spasmodic action in all the muscles around the joint, producing apparent anchylosis of the hip-joint, the pelvis moving with the femur. Pressure of the head of the femur against the acetabulum and pressure behind the trochanter caused pain.

Ordered elevated shoe (2½ inches) for left foot, and crutches.

Patient returned March 4th. Has learned to walk with the crutches, and has had no pain for the past week. When last seen, March 11th, he was still entirely free from pain, movement excited less spasmodic action in the muscles around the joint, and the flexion of the thigh on the abdomen had somewhat diminished. A point of interest in this case is the early period at which children may be taught to use the elevated shoe and crutches.

The third case I bring forward as an illustration of complete recovery from morbus coxarius (third stage), treated by the elevated shoe and crutches. This case has been fully reported in the January number, 1879, of *Hays' Journal*, from notes by Dr. Paine, and I will not repeat it here. An examination shows that the position of the limb and foot is perfectly normal; there is no shortening; the joint moves freely in all directions without pain; the most careful scrutiny reveals no evidence of disease, and he looks and feels well. He was under treatment at the Infirmary for eight months, when his recovery was pronounced complete.

By these simple appliances—shown on the patients whom I have presented to you this evening—we fulfill all the indications for the mechanical

treatment of hip-joint disease ; and I desire to emphasize the statement, that whatever artificial appliances for fixation and extension may be added, they simply tend to increase the discomfort of the patient.

Immobility, which it is just as important to obtain in the treatment of inflammation of this, as of other joints, is secured by reflex contraction of the peri-articular muscles, aided by intra-capsular effusion, and the voluntary effort of the patient to keep the joint at rest, on account of the pain which motion produces. Fixation of the joint is one of the earliest and most characteristic conditions in morbus coxarius ; and it is so marked, that when we move the limb the pelvis moves with it—there is apparent anchylosis. This rigidity continues until Nature says immobility is no longer necessary ; but so long as it is necessary, she secures it better than we can by any artificial appliances. In the later stages of the disease motion is desirable, and gradually, as the inflammation subsides, the muscles become relaxed, motion returns, and anchylosis is prevented, except in extensive destruction of the joint-surfaces, in which case a cure by anchylosis is the thing to be desired.

Extension is made by the weight of the suspended limb, which is equal in weight to one-fifth of the whole body, is greater than the weight ordinarily employed for extension, and is quite sufficient to subdue the spasm of the muscles which crowd the head of the bone into the inflamed acetabulum, and is the chief cause of the pain which the patient experiences. We all know how promptly contraction of the muscles of the extremities, in case of cholera, or from other causes, is overcome by forcible extension. The pain in the part is relieved, not by separating the inflamed articular surfaces, as has been claimed, for we cannot separate them to an appreciable extent by any amount of extension that can be applied. The extension not only relieves pain, but it corrects the *malposition* of the limb, whatever it may be, and prevents the deformity which would otherwise occur from contraction of the muscles or partial dislocation of the head of the bone. By means of the elevated shoe and crutches, *the weight of the body is removed from the diseased joint, and the patient can enjoy all the benefits of open-air exercise*, conditions so evidently necessary as to require no special consideration.

It seems to me probable that the method of extension here described is both more efficient and more agreeable to the parts concerned, by reason of being more gradual, equable, less arbitrary and constraining, and, therefore, exciting a less degree of reflex resistance than most other methods. There is a certain degree of instinctive, unconscious recoil in the mind of every patient, young or old, against all the various devices of constraint or imprisonment which a splint or apparatus implies.

This plan of treatment should be adopted at once, whatever the stage

of the disease, and continued until the cure is completed, except in the comparatively rare form of arthritic coxalgia, where acute inflammation of the synovial membrane and other soft structures of the joint is suddenly developed, attended with great constitutional disturbance and excruciating pain, increased by the slightest movement of the limb or the shaking of the bed. In such cases it would be inappropriate at first. Until after the acute symptoms have subsided they should be treated in bed with the long splint and the weight and pulley, together with other appropriate remedies.

There may be cases in which it will be necessary to make extension at night, by the weight and pulley, to relieve the usual nocturnal pain, while the elevated shoe and crutches are used during the day ; but I have not thus far met with any, even among those who had used the night-extension with some portative apparatus during the day, up to the time they came under my treatment.

The patient soon learns that relief from pain is obtained by suspending the diseased limb, and then he is glad to walk or stand on the crutches three or four hours daily. This appears to be sufficient to relax the muscles to such a degree that spasmodic contraction with the accompanying pain does not take place at night.

For children who are too young, and older persons who are too feeble to use common crutches, Darrach's wheeled crutch, or the ordinary go-cart, are admirable aids to locomotion. Darrach's crutch is the best, as it is so constructed that the patient may be partially suspended in the crutch, if necessary, by a perineal band, which prevents fatigue, and it is also lighter and more elegant in its construction. The elevated shoe should be used with either instrument. If a case comes under treatment at so advanced a stage that resection is necessary, the elevated shoe and crutches should be used after the active symptoms following the operation have subsided, instead of adopting the usual practice of confining the patient to bed and using the weight and pulley.

THE KNEE-JOINT.

From the diseases of the hip-joint we will descend to those of the knee ; but we must take the metaphor, as Mr. Solly says, in an anatomical, not a surgical sense ; for the frequency with which inflammation occurs in the knee-joint, owing to its complicated mechanical machinery and its exposed position, both in relation to atmospheric changes and liability to injury from violence, invests the subject with an interest to the surgeon quite as great, if not greater, than that which pertains to the hip-joint.

For the morbid conditions of the knee-joint the indications for treatment are in all respects the same as for inflammation of the hip-joint, with the addition of *compression* over the joint.

The knee is not, like the hip, surrounded by powerful muscles, which, by their rigidity, immobilize the diseased hip-joint. It is necessary therefore, in the case of the knee, to bring to our aid some mechanical restraint in order to effect complete rest. To secure *fixation* of the knee-joint I use splints made of hatters' felt, such as you see on the patient before you. It consists of seven layers of cotton cloth saturated with shellac, and well rolled together while hot. It is manufactured of this thickness specially for me, by Mr. Holley, of South Fifth Avenue, New York, and may be obtained from Tiemann, and I suppose other surgical instrument makers. That ordinarily sold consists of but five layers of cloth, which, for most cases, is not firm enough. To give effectual rest to the joint, the splint should be of sufficient length, and wide enough to nearly surround the limb; it should extend half way up the thigh, and to a corresponding point below the knee. (Fig. 3.) A shorter splint, merely

FIG. 3.

wide enough to cover the posterior part of the limb, does not secure the complete immobility which I have insisted upon in the treatment of diseases of the joints, where absolute rest is demanded. The splint having been cut of the proper length and width (the material is easily cut with

a sharp knife), and the limb covered with a stocking, the felt made pliable, preferably by dry heat in an oven or before an open fire, or by immersion in very hot water, is applied to the limb, and covered quickly and firmly with a bandage from below upwards, so as to mould it to all the inequalities of the surface. While the splint is being applied, an assistant should make extension from the foot so as to straighten the limb as much as possible, in cases where the joint is flexed; but no violent effort should be made to reduce the malposition; this can usually be accomplished by the gradual, painless (physiological) extension made by the weight of the limb, to which we shall presently refer. The joint surfaces are morbidly sensitive to pain, which would be greatly increased if they were suddenly and forcibly pressed together, in the effort to reduce the deformity at once. If the surgeon's hands are very sensitive to heat, he may handle the splint better by wearing a pair of cotton gloves wet in tepid or moderately cold water. So soon as the splint regains its inflexibility, and this it does very quickly, it may be removed, trimmed up and holes punched an inch or an inch and a half from the front edges for lacings. The object in punching the holes a little way back from the edges is to permit the splint to be made smaller by cutting off the edges, so that pressure may be kept up as the knee diminishes in size. The splint should nearly meet in front, and be laced as tightly as the patient can bear with comfort; all the benefits of elastic pressure may be secured by surrounding the knee with a layer of wool wadding, which never becomes matted, never loses its elasticity, and is an extremely comfortable method of making pressure, if the patient should complain of discomfort from the splint. If in any case it is considered desirable to leave the top of the knee uncovered, a semi-circular piece may be removed from either side of the splint, and windows may be cut at any point where there are fistulous openings which require dressing. The splint may be made more comfortable in warm weather by perforating it here and there with a punch. If the leg is rotated on its longitudinal axis, with a tendency to inversion or eversion of the foot, this should be prevented by extending the splint down to the foot.

If the leg is flexed when the splint is first applied and cannot easily be forced into a straight position, the angle of the splint should be changed from time to time, as the leg becomes straighter under the influence of extension by its own weight. This may be done by softening the posterior part of the splint by the application of a sponge dipped in hot water; a bandage should then be firmly applied, while extension is made upon the leg by the hands of an assistant. So soon as the splint hardens, the bandage is removed and the lacings tightened. The splint, although firmly applied, does not interfere with the straightening of the joint by the extension made by the weight of the leg.

I prefer the felt splint to one made of plaster of Paris, leather or liquid glass, because, while it is equally firm, it is also lighter, adapts itself just as well to the inequalities of surface about the knee, is more easily applied, its angle may be changed without removing it from the knee, and it may be unlaced and opened to examine the parts, or even removed, without disturbing the joint.

By means of the knee splint, we not only fix the joint and contribute to correct its malposition, but we also make *compression* upon the part, which is a valuable therapeutic auxiliary in the management of these cases, and its importance must not be overlooked. Compression causes absorption of non-purulent effusions into the joint, removes the boggy, infiltrated condition of the connective tissue which surrounds it, protects the part, and gives support to the relaxed ligaments and synovial membrane.

Extension is best accomplished by the use of the elevated shoe and crutches, which have already been described in considering the treatment of hip-joint disease (Figs. 1 and 2.) The weight of the suspended leg, which may be estimated as one-twelfth to one-tenth of the weight of the body (eight to ten pounds in a body weighing one hundred pounds), is quite sufficient to tire out the muscles, which by reflex contraction compress the already suffering tissues within the joint, increasing the pain and leading to intersticial absorption—in short, the muscles are restored to their normal length. By means of extension we also correct the malposition of the limb, which is usually contracted to an angle of 120 degrees; but extension has not the slightest influence in separating the diseased articular surfaces, nor do I consider this necessary. This method of extension is so gradual and equable, and therefore so agreeable to the parts concerned, that the muscles are persuaded to relax, if such an expression is permissible in this connection, instead of being irritated and stimulated to contraction.

The apparatus of Prof. Sayre for producing extension of the diseased knee-joint, as well as the appliances of H. G. Davis, and Sherman, of Chicago, for the same purpose, are creditable to the inventive genius of their respective authors; but those of you who have used either of them must be aware of the skill and experience necessary to apply them properly, the constant attention they require to keep them suitably adjusted, and the discomfort to the patient produced by the irritating effects of the adhesive plaster by which they are all attached to the limb. Moreover, the effort to produce forcible extension by these various devices excites reflex resistance, and the patient, young or old, instinctively recoils from the attempt to overcome muscular contraction by an exertion of strength, applied by means of an apparatus.

The weight of the body being removed from the diseased joint by the use of the elevated shoe and crutches, the patient should be kept out-of-doors as much as practicable, and if old enough to understand the *rationale* of the treatment, the importance of using the crutches three or four hours daily should be explained to him, and if necessary their employment enforced. Patients should also understand the importance of keeping the joint at rest. They not infrequently complain of the restraint of the splint, and secretly remove it themselves (I speak especially of dispensary patients), not because they really suffer pain from the position or confinement of the limb, but because they are afraid of losing the use of the joint. I mention this, not to induce you to shut your ears or disregard the complaints of patients—on the contrary, I think they always deserve attention—but to warn you against deceit from this cause.

There are many mild cases of chronic inflammation of the knee-joint characterized by slight effusion into the joint, and tenderness on pressure over the lower part of the inner condyle of the femur, or at the inside of the head of the tibia, in which there is no pain on pressing the articular surfaces together. In such cases the application of the knee splint is sufficient to effect a cure, without the use of the elevated shoe and crutches.

When the disease has resulted in destruction of the joint and caries, either from the violence of the attack or the advanced stage of the disease when it came under observation, we may still hope to save the limb and secure a cure by anchylosis. In fact, by rigidly carrying out the indications above referred to, of which the first in importance in all joint inflammations is perfect immobility of the part, the most unpromising cases not infrequently recover; but if the patient is becoming exhausted by suppuration, and there is not sufficient recuperative power left to throw off the disease, resection or amputation may become necessary.

THE ANKLE-JOINT.

In the treatment of inflammation of the ankle-joint and its consequences, *perfect rest* of the parts (mechanical immobilization), and the *removal of pressure* from the diseased articular surfaces, is quite as important, and I may add quite as satisfactory, as in the diseases of the hip and knee, and the indications may be met in the same way. Instead of the felt, I prefer to use for fixing the ankle two splints made of plaster of Paris, because they adapt themselves better to the inequalities of the surface about this joint; one is to be applied in front, and the other behind, extending from the middle of the leg to the ends of the metar-

sal bones, and wide enough to leave an interval of half an inch between the edges on the inner and outer side. The splint should be made of two thicknesses of Canton flannel, with coarse meshes, or three thicknesses of coarse toweling, cut of the proper length and width. One layer of cloth is laid upon a table and covered with liquid plaster of the consistence of cream and spread smoothly with a table knife. The other layers are then immersed in the plaster and applied evenly and smoothly over the first ; and when both splints have been prepared, one is applied in front and the other behind, with the under surface of the first layer, which is not covered with plaster, next to the skin, and a roller bandage is firmly applied over the splints from below upwards. The surgeon should now grasp the foot, and holding it at a right angle to the leg, make extension until the plaster hardens, which requires about five minutes. The bandage should then be removed, and the splints surrounded by three or four strips of adhesive plaster, and the bandage re-applied more loosely. Windows may be cut in the plaster, so as to allow any openings that may exist in the parts to be uncovered. (Fig. 4.)

Fig. 4.

In all cases of diseased ankle-joint the heel is raised more or less by the contraction of the gastrocnemii, and the toes pointed downwards, if it is permitted to pursue its own course, and it is important to overcome the contraction of the muscles, and place the joint at rest with the foot in its normal relation to the leg—(1.) To secure its proper position should anchylosis take place ; and (2.) To relieve the pain produced by the unremitting muscular contraction day and night.

To remove pressure from an inflamed ankle-joint and to provide means for letting the patient get the benefits of the open air is not less important than in the case of a diseased hip or knee joint. To accomplish these essential indications a variety of instruments have been devised. But they are liable to the same objections which have been found to the appliances used for producing extension of the knee-joint. After an experience somewhat extended in the treatment of these affections, I have no hesitation in recommending the elevated shoe and crutches as the best and simplest method of making extension and removing pressure; it is just as effectual for the ankle as for the knee and hip joints. The weight required is not great, and the weight of the foot is sufficient to overcome the muscular contraction.

If the foot, from long neglect, cannot at once be brought to a right angle with the leg, the splints should be renewed every five or six days, increasing the extension a little at each application, until the foot is brought into proper relations with the leg.

The advantages which the mechanical treatment here described possesses over that commonly employed in the management of the diseases of the joints of the lower extremities are:

1. It saves the surgeon the trouble and annoyance of applying and carefully watching the instruments in ordinary use, to see that proper extension is kept up and undue pressure prevented, while the patient's comfort is greatly promoted by dispensing with adhesive plasters, which irritate the skin and require removal from time to time, and also with the perineal band, in hip disease, which is a constant source of discomfort.

2. The spasmodic contraction of the peri-articular muscles is overcome by the gentle, persuasive and painless (physiological) extension made by the weight of the limb for several hours each day, whilst forcible extension, either by the ordinary portative instruments or by the weight and pulley, irritates the muscles and stimulates them to resistance and contraction, which must be overcome by main force.

3. I am quite confident, judging from the experience thus far obtained, that the plan of managing diseases of the joints herein described will shorten their duration more decidedly than can be done by the older methods of treatment.

4. The apparatus (if so simple a thing deserves the name of apparatus) is inexpensive, and can be made by any ordinary mechanic.

In conclusion, allow me to say that it was with a good deal of reluctance that I ventured to condemn as useless or hurtful the appliances hitherto in use in the treatment of diseases of the hip, knee and ankle joints, and to commend to professional notice new and simpler methods.

I should not have had the audacity to do so, had not my convictions, based upon practical experience, have seemed so plainly to warrant the positions I have endeavored herein to maintain. These convictions have been strengthened also by the favorable opinions expressed of the treatment of hip-joint disease, since the publication of my paper upon the subject, by surgeons in different parts of the country, for whose judgment I have long been accustomed to entertain the highest respect.

DISCUSSION.

Dr. Segur: The cases shown to us this evening by Dr. Hutchison, cured of hip-joint disease, or in favorable progress towards cure, only confirm the impressions and expectations excited by the paper he has read to us. I think that when any one of our Society, present this evening, on reading Dr. Hutchison's paper in the Proceedings, has a case of hip-joint disease, he will be disposed to give this new and admirably simple treatment a trial. Within the year many reports of cases, I hope, will be made to this Society. I do not doubt that the results and record made will establish this as an important advance in surgery. Dr. Hutchison says that he has found his cases under this treatment make more rapid progress towards cure than under any other treatment. This statement is very near to the merits of a method of treatment, and any cases observed and reported here should be accurately studied with reference to the period when the treatment is begun and the progress made. I should expect this to be true for one reason—because it is stated that the relief from pain is immediate, and so great is the favorable change in the diseased structures made in the hours of the day when the treatment is in action, that, in effect, the nocturnal pains do not occur afterwards. That means apparently so simple and unstudied should produce such surprising and valuable results, may be accounted for by the consideration—1st. Perhaps most often the complicated and indirect is reached before the direct and plain. 2d. Early in the paper occurs the proposition that a healthy nutrition of the surrounding parts promotes the restorative processes in the diseased tissues. This principle, it appears to me, is very elaborately worked out in the analysis of the effects of the new method, and so the claim that it is physiological is justified for a procedure which employs while it directs, and promotes while it controls natural processes. For it gives rest to the continuous muscular contractions made by the patient to avoid pain when no appliances of treatment are employed, and it gives natural variety of movements to muscles fixed and bound in the usual splints.

Dr. Corbally: When Copernicus formulated the theory that the earth moves around the sun, he proposed a complete change in the system of astronomy as taught since the days of Ptolemy. No greater change has been since proposed in scientific teachings, or in practical methods, than the one now presented to us by Dr. Hutchison. The harness and the trappings; the weights and pulleys, and the adhesive plaster; the perineal band and the iron splints, with which the diseased limb was formerly encumbered, have been entirely discarded. The apparatus, simple as it is, he has placed on the healthy limb, and thus caused it to support the weakness and bear the burden of its diseased fellow. From the time of Bonnet, of Lyons, to Maisonneuve, much was written on diseases of the joints. Their pathology was carefully investigated, and more correct principles regarding it were advanced, but little improvement was made in their treatment. Heuter, who has written the best treatise on the diseases of the joints hitherto published, says that the methods of extension employed are of very doubtful utility—they do not fix the joint perfectly, nor do they remove the pressure caused by reflex contraction. I can add the results of a very limited experience in support of the principles advanced in this paper, and generally the same satisfactory results have followed the treatment.

Mary W., æt. 19. About nine years ago swelling was observed in the left knee. She felt no inconvenience from this for about four years, when the joint became so painful that she placed the foot on the ground with difficulty. She came to St. Peter's Hospital on the 23d of September, 1878, when the joint measured 17½ inches in circumference; the limb was extended, had little motion, and the part below the knee was much atrophied. There was great tenderness on pressure, especially on the lower and lateral borders of the patella. The cervical glands were enormously enlarged, and a condition of general cachexia existed. A long crutch was ordered, and she was directed not to place the foot on the ground. Iodide of potash, iron and a nourishing diet were ordered, and the patient was directed to spend as much time in the open air as the weather would permit. March 18th, 1879, the knee has diminished one and a half inches in circumference. Firm pressure causes very slight pain on the lower border of the patella; the tenderness on the sides disappeared two months ago. On the recommendation of Dr. Hutchison, the high shoe and a pair of crutches will be substituted for the one now in use.

C. M., æt. three years. For a year or more has been unable to stand without support, in consequence of a phlegmonous inflammation of the right thigh. This patient was seen a year ago at St. Peter's Hospital, but his parents were unable to procure the instruments then recommended. Was seen on the 7th of March, 1878, and the shoe and crutches, as described by Dr. Hutchison, were ordered and applied on the 12th. March 14th, pain much relieved; child stands well, and makes some attempts to move. A modification of Darrach's instrument, so as to bring it within the means of the poor, would be extremely useful in treating young children.

H. T., æt. eight years. From the time that he began to walk it was noticed that he put the right foot forwards and seemed to drag the left. Four years ago right dorsal curvature was observed, and a modification of Taylor's instrument was applied

at an institution in New York. March 4th, 1879, curve presses the dorsal muscles on the right into a hard mass under scapula; dorsal muscles on left relaxed and flabby. Superior edge of scapula drawn downwards and forwards by the shoulder strap, and the posterior border projects nearly horizontally backwards. Child delicate. A careful examination showed the right leg to be one inch shorter than the left. Obliquity of the pelvis, and other symptoms usual under such circumstances, were present. Lifting the child, with hands in the axilla, removed the secondary curve entirely and diminished the primary very much. Raising the boy by the left shoulder had nearly the same effect. Raising the left hand above the head and making gentle traction brings the muscles on the left into action, diminishes the dorsal curve and partly restores the right dorsal muscles to their natural condition. At the suggestion of Dr. Hutchison, Barwell's inclined seat was recommended. Electricity and massage are used; a shoe to raise the pelvis a little higher on the side of the shortened limb has been procured; a pair of crutches for occasional use, the left, in this case, a little higher than the right; parallel bars, one higher than the other, and a single cord from the ceiling, by which the child should exercise the left side only, have been provided. The weakened muscles are brought, by these means, into pretty constant action, without fatiguing the child with any one of them for a great length of time.

There is reason to believe that this method of treating spinal curvature, in all its forms, will generalize the method of Dr. Hutchison, and suggest its application to all the joints in which the weight of any portion of the body can be utilized. The poor have suffered the most from these diseases, for various reasons, and, unfortunately, or *fortunately*, they have seldom been able to procure the costly and complicated instruments hitherto recommended. Heavy plaster jackets, and iron instruments of various kinds, suggesting wasting of restrained muscles, may be dispensed with, except when anchylosis is desired, and the specialist may find, thanks to our fellow member, that *his occupation's gone ;* for every man who is fit to be a surgeon can treat such cases intelligently, and expensive institutions for their cure will not be necessary, except, perhaps, for rare cases.

Dr. Paine spoke of his experience in treating cases of morbus coxarius at the Brooklyn Orthopœdic Infirmary, under the charge of Dr. Hutchison.

He had under his observation about a dozen cases that had been put on the crutches and high shoe, and he was very much pleased with that mode of treatment. Some of the cases had been reported, and they were sufficient proof of the success of that method. Other cases were also doing well.

He found it difficult sometimes to make the parents of children comprehend the necessity of perfect rest for the diseased limb, and found it important to give minute directions that the child must never, under any circumstances, put the foot of the unsound side on the floor; nor must

he be allowed to creep. In one case he had known the shoe to be put on the wrong foot. Constant supervision was needed.

In regard to the use of the felt for knee splints, he had had considerable and very satisfactory experience. He had formerly used plaster of Paris, but since Dr. Hutchison had drawn attention to the felt, had found that so much more satisfactory, that he now only used that. It would work equally well for a child or an unusually heavy adult.

Dr. Burge said he had seen so much annoyance in the use of mechanical appliances for the treatment of these inflammatory affections of the hip, knee and ankle, that he was in a teachable and receptive mood. In fact, he had mentally endorsed the new treatment proposed by Dr. Hutchison as soon as propounded. Finding nothing to criticise in the doctor's plan, he had sought it in his remarks. He believed Dr. Hutchison had underrated the extent and importance of the separation of the articular surfaces effected by the very means which he had so highly and so justly extolled. Dr. B. called attention to the fact that the ligaments vary in length and elasticity in different individuals—in some cases being capable of such obvious elongation as to admit of voluntary subluxation. He thought the entire relief of pain afforded in these cases by the weight of the limb could only be explained in this way.

A CASE OF PERI-TYPHLITIS—RESOLUTION--RECOVERY.

BY BENJ. EDSON, M.D.

On the 12th of September, 1878, I was called to J. N., a young man nineteen years of age. He had been in bed four days, unable to lie on either side, the only endurable position being upon the back, with the knees somewhat drawn up. Tongue thickly coated; anorexia. Temperature in axilla 102°; pulse, 108. The abdomen was tense, with severe pain and great tenderness, more especially upon the right side, extending from the iliac fossa upward as high as the umbilicus. In the inguinal region was a firm, hard mass, which could be pretty well outlined by palpation. Micturition so intensely painful as to cause the patient to refrain as far as possible. At the outset there was nausea and vomiting.

A day or two before the attack he had eaten largely of grapes, and there was suspicion that the seeds had become impacted at the junction of the small and large intestines. This view of the case was rather unsettled, however, by the assurance that two days before the bowels had

been quite freely moved by an enema. Food or drink taken into the stomach caused almost immediate and intense pain in the right iliac region.

To secure rest and measurable relief from the peritoneal trouble, morphia and gelsemium were given in suitable doses; and to release the possible impaction or obstruction a cathartic and also an enema were administered, followed by free movement of the bowels; but no grape seeds were passed, neither at this, nor at any subsequent time during his illness. These measures, with the addition of fomentations, gave considerable relief.

Sept. 13.—Patient more comfortable. Temp., 101°; pulse, 84. Has slept some and eaten a little. Area of tenderness somewhat diminished, and confined more to right side of abdomen. Treatment continued. During the next three days the temperature was from 100° to 101°, and the severity of the symptoms had perceptibly moderated.

On the ninth day of the disease, following a chill, the temperature suddenly rose to 103 $\frac{4}{10}$°, attended with aggravation of all the symptoms, and very marked mental disturbance. Pointing could be detected nearly over the caput coli, and the area of greatest tenderness was circumscribed to a space about two inches in diameter. By rectal touch the location of the trouble could be well made out. There seemed to be no room to doubt that I had to deal with peri-typhlitic abscess.

The question now presented was, whether there should be surgical interference. From the teaching of all the recent literature of the subject I could find, I could hardly avoid the conclusion that I should be criminally culpable if I failed to give the patient the benefit of an operation for relief.

On the tenth day of the illness Dr. Giberson was called in consultation. He confirmed the diagnosis and recognized the gravity of the situation, but did not favor operation, for the present, at least.

About this time I casually obtained the views of several surgeons, and was equally surprised and puzzled to find them holding directly opposite opinions respecting the proper course to be pursued. To say that I was sorely perplexed is but a mild expression of the state of uncertainty in which I found myself. While I did not care to question the wisdom of the counsel given in the consultation, I could not but feel that should, perchance, the abscess rupture inwardly and set up fatal general peritonitis, I should doubtless then wish the advice had been different.

For the next four days the temperature was maintained at about 103 degrees, and the general aspect of the case was not very encouraging. The treatment in this later stage was supporting, with the internal administration of tr. ipecac comp. in conjunction with fl. ext. of gelsemium.

Locally, oleate of mercury and morphia three times in twenty-four hours, the part being covered in the mean time with poultice of flax-seed and slippery elm.

At no time were the symptoms more grave than at 9 P. M. of the thirteenth day. You may judge of my surprise, then, at finding, on the morning of the fourteenth day, the temperature 99 degrees, pulse nearly normal, pain wholly gone, and scarcely a trace of the local trouble remaining. There was no external opening of the abscess; no critical discharge from the bowels or the bladder. Convalescence had begun, but was not as rapid as might have been reasonably expected. I am unable to account for the disappearance of the contents of the abscess, except upon the theory of their escape into the cellular tissue and subsequent absorption; a condition of things which would partially account for the somewhat tardy convalescence.

I have given this case in outline—not because I think it presents any very unusual or remarkable features, but simply for the reason that the professional mind seems to be unsettled and at variance respecting the treatment to be pursued. The subject, therefore, is one of practical interest.

In this connection I have thought that a brief résumé of the subject might not be out of place.

I have not been able to find much recorded in regard to this affection until within a comparatively recent period. Either because its distinctive character was not fully recognized, or because it was so little amenable to treatment and so largely fatal, it found little place in books or in current medical literature.

It does not seem possible to obtain any just idea of the proportion of deaths and recoveries under the expectant plan of treatment. In the New York *Journal of Medicine* for November, 1856, Dr. Lewis tabulates 47 cases, 46 of which ended fatally. In a discussion of Dr. Gouley's paper before the New York State Medical Society in 1875, Dr. T. F. Rochester stated that he had treated 15 or 20 cases of peri-typhlitis—no surgical interference—13 cases proved fatal. Of the 67 cases analyzed by Dr. Bull, there were 33 deaths and 34 recoveries.

The first surgical operation for the relief of peri-typhlitis was by Dr. Willard Parker, in 1843, though it was not published until 1867. Dr. Hancock, of London, performed the operation as original in 1848, and published an account of it; but it did not meet with sufficient approval to elevate it to the rank of a legitimate operation. It has been said that Dr. Parker *revived* the operation in 1867, the date of the publication of his four cases. If the foregoing data be correct, as I believe they are, to Dr. Parker is due the credit of priority.

Parker's operation consists in cutting down upon the abscess, the external incision being from 4 to 6 inches in length, over the place of pointing, and parallel to Poupart's ligament. At the fascia transversalis the incision is less than one inch in length.

Dr. Gurdon Buck's modification consists in first introducing an exploring needle—small canula, No. 1, bougie scale—until pus is reached, then cutting down beside the canula or needle. Several operators have first cut down upon the fascia transversalis, and then explored with aspirator, hypodermic needle, or otherwise, being governed in their further procedure by the circumstances of the case. Dr. H. B. Sands thinks that the external incision need not be more than two inches in length.

There are two cases recently reported in which the incision was curvilinear, upward. What advantage, if any, is claimed for this kind of incision, I do not know.

The time when the abscess should be opened, if at all, is not well settled.

Niemeyer says, "The abscess should be opened as soon as there is fluctuation."

Dr. Lewis says, "If resorted to at all, the opening should be made early. If the symptoms are urgent and threatening, it must not be delayed on account of the absence of fluctuation."

According to Dr. Parker it should be "after the fifth and before the twelfth day."

Meigs and Pepper advise that it be made "the moment an emphysematous condition of the skin is detected at any point." Dr. Gouley thinks "Too much haste in cutting is not judicious, and it is questionable whether the operation should be done before the seventh or eighth day." Dr. Weber objects to delay beyond the eighth or ninth day. Dr. H. B. Sands recommends "between the twelfth and eighteenth days." Dr. Whitall, of New York, says, "Before resorting to surgical interference, every other means should be taken to arrest the morbid action. When there is any doubt about the favorable course in peri-typhlitis, cut down at least as far as the fascia transversalis."

As regards the safety of the operation, I am unable to find the record of any fatal cases directly attributable to surgical interference. Almost the only objection that can be urged, aside from the possible mischances attending every surgical operation, is the liability to weakening the ventral wall, so as to require the patient to wear a truss for a longer or shorter period. This has actually occurred in a few cases. In the two or three fatal cases occurring in connection with external incision, the unfavorable termination has seemed to be due to unfortunate delay, or to constitutional vice, or to complications not less serious than the peri-typhlitis.

That the favorable termination by resolution in my patient is to be looked upon rather as an incident in the case than as an argument in favor of delay, will appear evident, if we consider the very different aspect that would have been put upon it, had the abscess ruptured into the peritoneal cavity, setting up general and most likely fatal peritonitis.

Before closing this paper, I should remark that the practice of early surgical interference seems to be peculiar to the vicinity of New York, and the influence of New York teaching. I shall not myself attempt the solution of the questions herein raised, any further than may be inferred from what I have said. As regards the advisability of operating, if so, how and when, these questions I present for the consideration of this Society.

BROOKLYN ANATOMICAL AND SURGICAL CLUB.

Stated Meeting, February 17th, 1879.

The President, Dr. L. S. Pilcher, in the chair.

NEPHRO-LITHIASIS; NEPHRITIC ABSCESS; URINARY LUMBAR FISTULA.

Dr. Geo. W. Baker presented a mass removed from the region of the right kidney, in a female aged forty-four years; from the upper part of this mass proceeded a fistulous track, which had opened externally in the lumbar region, and from which for six years previous to death urine had escaped. Upon section, this mass was found to consist of a remnant of the right kidney imbedded in adipose tissue infiltrated with dense organized inflammatory deposits. In its centre was a cavity whose anterior and outer wall presented a thin layer of atrophied cortical substance; occupying the places of the pyramids were cysts, twelve in number, or diverticula from the main cavity, with which they freely communicated; the posterior wall and hilum of the kidney were unrecognizable; a canal which communicated with the ureter extended from the lower part of the central cavity, and from the upper part an opening led into a sinus which opened externally—the lumbar fistula.

The central cavity was occupied by a calculus of uric acid, whose surface was roughened by phosphatic deposits; the calculus was nearly spherical in shape and about one inch in diameter; similar calculi, of irregular shapes, occupied two of the smaller cysts.

This specimen was accompanied with the following history: Mrs. S., native of Germany. When twenty-nine years of age, after the birth of her first child, began to have pain in the region of her right kidney, and soon after noticed a white discharge in her urine; this continued to ap-

pear at varying intervals during a period of eight years without apparently impairing her health; no medical treatment was had for it.

After having borne a second child, and having suffered one miscarriage, she was five months advanced in a fourth pregnancy, when a severe fall occasioned a second miscarriage; recovering from this, the pain in the region of the right kidney began to be severe and continuous, so that she applied for treatment; examination showed enlargement of that region, with marked dullness on percussion and pain on pressure; the tongue was furred, appetite poor, thirst considerable, pulse 120 and feeble, much pus in urine.

At the end of three months, the pain and swelling had increased; a condition of hectic had developed, producing much prostration; distinct fluctuation was present in the tumor.

A free incision was then made at the most prominent point of the swelling, about two and a half inches from the vertebral spines; about twelve ounces of green offensive pus was evacuated. For some weeks thereafter the condition of the patient was critical; much emaciation, repeated chills and sweatings, with great prostration, succeeded; by the liberal use of stimulants, tonics, etc., she gradually rallied, and finally returned to comparative good health; pus continued to be discharged from the opening for several weeks, finally urine only escaped, and a permanent urinary fistula was established; through this fistula at one time a calculus, of grayish color and of the size of a large pea, was discharged. With the exception of slight rheumatic attacks and occasional swelling of the extremities, she had no illness during the four following years, although the urine discharged per urethram still continued to be mixed with pus.

At the end of this period she was again confined, had a natural labor, and bore a healthy child; from this time she began to suffer from anæmia, which became progressively intense, a condition of general anasarca developed, and at the end of two years more she died from exhaustion, having suffered for nearly fifteen years.

At the autopsy the right kidney presented the conditions already described.

The left kidney was healthy but enlarged.

RENAL CALCULUS OF EXTRAORDINARY SIZE.

Dr. F. W. Rockwell presented a calculus which was a complete cast of the pelvis, infundibula and calyces of the left kidney. It weighed, when removed, ten drachms. It measured in its long diameter 3½ inches; in its circumference, at part corresponding to pelvis, 3⅝ inches. It consisted of a central nucleus formed of urates and inspissated mucus,

around which concentric layers of phosphatic deposits had accumulated, until a cast of the interior of the kidney had resulted.

This specimen was obtained from the body of an old woman whom the doctor first saw on the evening preceding her death, when she was already moribund. A meagre history of previous cystitis and pyelonephritis was obtained from one of her friends.

At the autopsy, the bladder was found filled with muco-pus, its walls were hypertrophied, the result of long-standing cystitis.

The left kidney contained the specimen presented.

The right kidney was healthy and hypertrophied.

OPERATIVE TREATMENT OF NEPHRO-LITHIASIS —EXTIRPATION OF THE KIDNEYS—NEPHROTOMY.

Dr. George Wieber said that it was in cases like these of Dr. Baker and Dr. Rockwell that the operation of extirpation of the kidney had been proposed and practiced by Prof. Gustave Simon, at Heidelberg. In the case of a woman, 30 years of age, who had for years suffered from frequent attacks of renal colic, and had passed many small calculi, and had become much exhausted by the frequent repetition of her intense sufferings, Prof. Simon extirpated the left kidney on the 8th of August, 1871, after having demonstrated that the right kidney was healthy. At the time of the operation, when the kidney had been exposed, the operator was unable to detect the presence of any calculi; but being sure of his diagnosis, he proceeded to remove the organ, when, by incising it, he found 18 to 20 calculi, from the size of a cherry-stone down, within its cavity. The operation lasted half an hour. The extirpated kidney was smaller than usual; the pyramids were pressed together and somewhat atrophied; one pyramid was changed into a cavity, in which, as well as in the distended calyces at other parts, were imbedded many small calculi and aflindriform coagula of blood. For 21 days the patient did well, and had so far recovered that it was difficult to keep her in bed. The temperature was usual, and had not reached 101 degrees F. at any time; the wound was nearly closed. On the 21st day, after an examination by Simon, she had a chill, followed by fever, which, however, had passed away by the next day. On the 23d day she felt well, and clandestinely ate a large quantity of under-ripe peaches and plums. Peritonitis quickly developed, which was soon complicated by pleuritis. She sank and died on the 8th day thereafter—the 31st after the operation. At the autopsy, the large cavity caused by the extirpation of the kidney was entirely filled in, and there was no pus detected in the neighborhood of the wound. The right kidney was much enlarged, and was of perfectly healthy condition.

Dr. Wieber thought it apparent that the death of this patient was not attributable to the operation, which ought to be counted as successful, and as a satisfactory demonstration of the feasibility of the operation. Prof. Simon had extirpated a kidney once before, in the well-known case of Margaretha Kleb, upon whom he operated August 2d, 1869, removing the healthy left kidney, in consequence of the existence of an urinary abdominal fistula. This patient made a full recovery, and was in good health seven years afterwards.

The death of Prof. Simon prevented the completion of an exhaustive work on The Surgery of the Kidneys—the first two volumes of which had been published by him. These had not been translated into English.

Dr. J. H. Hunt stated that he was present at an operation by Dr. G. A. Peters, at St. Luke's Hospital, New York City, in May, 1872, upon a man 36 years of age, in whom a confident diagnosis of calculous pyelitis had been made. The affected kidney—the right one—was incised and explored, but no calculus was found ; the kidney being found to be badly disorganized from tubercular degeneration, was then extirpated. Death resulted 65 hours after the operation, from exhaustion. The remaining kidney was found to be healthy.

Dr. F. W. Rockwell reported a case of nephritic disease, and nephrotomy.

Mrs. G., aged 35 years, had been suffering for a year and a half with all the symptoms attending pyelitis, when she was seen by him in consultation with Dr. James E. Barbour, of South Norwalk, Conn. There was a tumor in the left groin, of varying size and prominence; intermittent appearance of pus in the urine; acute neuralgic pains in the side affected; chills, and gradually increasing emaciation, and hectic. The urine, when free from pus, was clear, free from albumen, and of normal specific gravity.

Nephrotomy was advised, in the belief that the case was one of nephro-lithiasis.

June 15th, 1877, an operation was performed by Dr. Barbour, assisted by Dr. R., and other physicians. The kidney was exposed by an incision parallel to the lower border of the last rib, and about two inches below it; a large aspirating needle was plunged into its pelvis, and carefully used as a probe to explore it ; no calculus was detected ; an ounce or two of thick pus flowed away through the needle ; the puncture was then enlarged, and an ordinary elastic rubber catheter introduced, and used as a drainage tube. The patient did well, experienced complete relief from her kidney symptoms, got up and moved about her house to a limited extent, but was soon after stricken down

by a low malarial fever, which terminated fatally about one month after the operation. No autopsy was permitted.

Dr. Chas. Jewett presented a cat from which he had removed one kidney three weeks before.

For a few days after the operation the animal had drooped, but then rapidly regained its accustomed vivacity. The animal having been chloroformed, the doctor laid open its abdominal cavity, and demonstrated the absence of the kidney, and the healthy state of the peritoneum. Two facts he showed by this experiment—the one, the physiological fact, that one kidney could do the work previously done by two so as to insure the health of the body; the other, the pathological fact, that little fear of peritonitis need be entertained from the enucleation of this organ. In the cat the kidneys were much more closely and extensively developed by the peritoneum than in man, but no peritonitis had followed their removal.

Dr. Jewett then demonstrated the operation as done by him.

Dr. L. S. Pilcher then demonstrated the operations of nephrotomy and extirpation of the kidney in man, by the lumbar section, upon a cadaver; he accompanied his demonstration by an historical and critical paper on the surgery of the kidneys, which, by vote of the Club, he was requested to present to the County Society.

GEO. R. FOWLER, *Secretary.*

POULTICES.—The common practice in making poultices, of mixing the linseed meal with hot water, and applying them directly to the skin, is quite wrong, because, if we do not wish to burn the patient, we must wait until a great portion of the heat has been lost. The proper method is to take a flannel bag (the size of the poultice required), to fill this with the linseed poultice as hot as it can possibly be made, and to put between this and the skin a second piece of flannel, so that there shall be at least two thicknesses of flannel between the skin and the poultice itself. Above the poultice should be placed more flannel, or a piece of cotton wool, to prevent it from getting cold. By this method we are able to apply the linseed meal boiling hot, without burning the patient, and the heat, gradually diffusing through the flannel, affords a grateful sense of relief which cannot be obtained by other means. There are few ways in which such marked relief is given to abdominal pain as by the application of a poultice in this manner.—*Dr. T. Lauder Brunton, in Brain.*

BROOKLYN PATHOLOGICAL SOCIETY.

Regular Meeting, February 27th, 1879.

The President, Dr. F. W. Rockwell, in the chair.

TUMOR OF BREAST.

Dr. L. D. Mason presented a tumor of the mammary gland, which he had removed from a lady 42 years old. She was a blonde, of light physique, the mother of two children, the youngest four years old. No menstrual disturbances or miscarriages. While nursing the first child ten years ago, she noticed a small nodule on the right side of the right gland. It remained the same till the second lactation, when she received a blow upon it from the child's head. It then began to enlarge slowly. Two years ago she first showed it to Dr. M. It was then of the size and shape of a hen's egg, not adherent, neither painful or sensitive. No glandular disease. No family history of tumors. Her condition was not cachectic. It was considered benign, and treated by gentle compression, with the exhibition of tonics and alteratives internally. The enlargement was slow up to three months ago, when she carried a heavy valise in the right hand and strained her arm. Since then it has nearly tripled in size. At the outer side it is adherent to the skin, which is somewhat discolored. The veins are enlarged, particularly when it is allowed to hang down. The breast measures 11 inches from above downward.

There is apparent fluctuation where it is adherent to the skin. General health good. No glandular enlargement. It is not attached to the thoracic wall. After consultation, removal was advised. Dr. A. J. C. Skene and others assisted at the operation. It was removed under the carbolic acid spray, the vessels being ligated with carbolized silk, the ligatures cut short, closed with sutures of the same material, and dressed with oakum and cotton batting. The wound united throughout by primary adhesion. The sutures were removed on the seventh day, and came away dry. The dressings were looked at every day under the carbolized spray, and changed as occasion required.

An eminent authority in surgery had considered this a chronic mammary tumor (benign). Another had regarded it as a cysto-sarcoma. The doctor desired the opinion of the Society as to the prognosis. On incision the entire gland was seen to be involved. It was converted into a mass of alveoli, filled with caseous matter. The trabeculæ were thin,

and resembled connective tissue in their gross appearance. The entire mass was invested by a firm connective tissue capsule. The gentleman who had dissected it thought, from the gross appearance and history, that it should be classed as a chronic mammary tumor. But much depended on the histology of the trabeculæ.

Dr. Bunker: The fact that one consultant pronounced this a chronic mammary tumor, and another equally eminent called it a cysto-sarcoma, does not imply any actual difference of opinion between them. The nomenclature of mammary growths is simply a chaos. Even Mr. Birkett applies the term adenoma to tumors of the most diverse structure and clinical history, and the "chronic mammary tumor" of Cooper is called "pancreatic sarcoma" by Abernethy, "corps fibreux" by Cruveilhier, "cysto-sarcoma" by Müller, "carcinoma hydatides" by Charles Bell, and so on. I believe the doctor was right in operating when he did. Cannot agree with those who would incontinently cut out every mammary tumor at sight.

About seven years ago I saw a case of which I was strongly reminded by the earlier part of Dr. Mason's history. I advised an operation, but Dr. Hutchison, to whom I sent the patient for consultation, advised non-interference, and the "lump" has since disappeared. I fear the Microscopical Committee will not be able to give a positive answer to the question, "Is this tumor malignant?" As Virchow says, malignancy is determined much more by the succulence of the parts and the clinical history, than by the histological appearances in the field of the microscope.

ACUTE PERITONITIS.

Dr. Walker presented portions of the peritoneum from the following case: A gentleman, æt. 30. For several days he had had a little sore throat and slight pain in the abdomen. On Feb. 21st, '79, he had two chills, followed by some fever. I found him in the evening feeling quite well. The tongue was slightly coated, and there was very slight tenderness over the abdomen, mainly in the ileo-cæcal region. Pulse and temperature apparently not above the normal. Was given quinine, on the supposition that it was a malarial affection. On the morning of the 23d he had some fever; pulse, 100; temperature not taken. There had been several watery evacuations during the night. A little more tenderness over the abdomen, though only on deep pressure. Had been somewhat delirious in the night. No eruption. Diagnosis, typho-malarial fever. The diagnosis was based partly upon the fact of his having slept in a room through the corner of which ran a pipe from a water-closet. An unpleasant odor had pervaded the room for a week. Leaking joints had been found by the plumber. The wife and child, sleep-

ing in the same room, had not been sick. On the evening of the 23d the tenderness was about the same; pulse, 120; temp., 101° F.; tongue coated with a thick and dry fur; sordes upon the lips. No nausea. Had retained cold milk and beef juice. One watery and one semi-solid evacuation since the day before. On the 24th I saw him at 11 A. M. He said that he felt better than he had for days. He wanted to eat more and to get up. His voice was clear and strong; pulse, 130 and weak. He had a cold perspiration. Had slept well under the influence of opium pills. He was ordered alcoholic and ammoniacal stimulants. At 11.30 A. M., as his wife attempted to raise him to give him food, he fell back dead. *Autopsy* on the following day, assisted by Drs. Pratt and Howe. *Omentum* thickened and congested, adherent in places to the intestines. *Intestines* injected and glued together by recent lymph. The *peritoneum* was softened and in some places could be easily torn off. The peritoneal cavity contained a pint and a half of serum, with abundance of lymph. Liver, spleen and stomach normal. Kidneys not examined. No rupture of intestines. The intestines were not distended. Doctor Walker called attention to the following points: 1st. A case of acute peritonitis, running its course in four days, with few, if any, decided symptoms. 2d. The difficulty of ascertaining the efficient cause. Was the diagnosis of typho-malarial fever justified? Was sewer-gas the cause of it? What was the cause of the sudden death?

Dr. Westbrook: The inhalation of the typhoid poison in sewer-gas was scarcely to be looked for, as it is so slightly volatile. The lesions of typhoid or of malarial fever were not found at the autopsy.

There was a disagreement among members as to whether the enteric lesion of typhoid fever was to be looked for in cases of typho-malarial fever or not.

Drs. Rockwell and Sherwell referred to the change of opinion that had taken place in regard to the symptoms of peritonitis.

Dr. Bunker: An examination of the kidneys might have supplied valuable information.

Dr. Wallace: In peritonitis, more or less sudden death is common, where the autopsy fails to show its cause. We should take into account the so-called shock that results from irritation of so large a sensitive surface.

GREAT OBESITY.

Dr. A. R. Matheson presented the history of a man who, at his death, weighed 360 lbs. He was an Englishman, 46 years old, six feet and two inches high. He had been a sea captain, and had been of average proportions up to the age of 30 years. Since then he had gradually accumulated fat. There was no family history of obesity. He had had

repeated attacks of gout, facial erysipelas and violent fits of "asthma," the dyspnœa being so severe as to prevent his lying down for many days at a time. He finally became rapidly comatose, and died on the 6th April. The autopsy was made, three days after death, by Dr. George R. Westbrook. Dr. Segur was also present. Dr. Segur referred particularly to the lack of fat about the jaws and neck, and to the comparative smallness of the upper and lower extremities.

The excessive accumulation of fat seemed to be limited to the trunk. The subcutaneous fat of the thorax and abdomen was from 2½ to 3 inches thick. The anterior mediastinum contained a layer about 1½ inches thick. The subpericardial layer (parietal and visceral) was at least one inch thick. There was a similar layer underneath the pleura. The *cavities* of the *heart* were dilated, the walls of about the usual thickness, and the muscle had undergone a granular degeneration. The entire organ weighed 28 ounces. The *lungs* were small, weighing only 17 and 18 ounces, respectively. The *subperitoneal fat* equaled or surpassed in thickness that of the thorax, particularly behind the peritoneum. The *omentum* weighed about 7½ lbs. The *liver* was about normal. The kidneys were intensely congested, and weighed 6½ ounces each. The demise was referred to acute renal congestion.

CARCINOMA OF STOMACH AND OMENTUM.

By Dr. O. J. D. Hughes. A widow lady, 62 years old, native of England. Healthy till one year ago, when she experienced an uneasy sensation in epigastrium, with indigestion and constipation. I saw her in August, 1878. After the trial of a few drugs the abdomen was examined, and a hard, lobulated mass felt, extending across the epigastrium. Drs. Armor and Skene, in consultation, confirmed the diagnosis. In January she became very ascitic. In February she was tapped twice, for the relief of symptoms from pressure. The fluid withdrawn was thin and of a reddish hue. Death took place on the 23d of February. At the autopsy, 24 hours after death, only the abdomen was examined. The *peritoneal cavity* was full of red serum. The surface of the membrane had growing from it nodules of a light color and translucent. The centre of the abdomen was occupied by an enormous mass of similar nodules, somewhat resembling an hydatidiform mole. This was found to be the great omentum. The colon traversed its posterior surface without being at all constricted. The walls of the stomach were from half an inch to an inch thick, the growth being most marked at the superior border and cardiac orifice. The under surface of the diaphragm was studded with similar nodules. The liver was hardened from hyperplasia of the connective tissue in the course of its vessels. The spleen was also

hardened. The kidneys were normal. Nodular masses were attached to the anterior surfaces of both broad ligaments and to both ovaries.

The Curator would be pleased to receive correspondence in regard to the exchange of microscopical slides. Address Dr. E. S. Bunker, No. 280 Henry Street, Brooklyn.

☞ *The Secretary requests members presenting specimens, to present therewith a written account of the history and pathological appearances.*

Benj. F. Westbrook, *Secretary.*

THE MORTALITY OF AMERICAN CITIES IN 1878.

BY DR. R. M. WYCKOFF, REGISTRAR OF VITAL STATISTICS.

The accompanying table has been abstracted from the bills of mortality of certain prominent American cities for 1878. The death-rates were, as a general rule, low in the past year; and there appears to have been a relatively low mortality from preventable causes in those cities whose reports have thus far been received. The statistics from those Southern cities wherein yellow fever raged are not yet accessible. A caution is, perhaps, necessary to those who make a comparison of the death-rates of the different cities, inasmuch as no uniform system of collecting death-returns exists in this country, and the estimated populations are, in some places, increased in an extravagant ratio. The cities whose populations and death-registration are believed to be trustworthy are indicated by an asterisk:

VITAL STATISTICS OF CERTAIN AMERICAN CITIES, *for the year 1878, showing Deaths, Death-rates and certain principal causes of death, with marriages, births and still-births.*

CITIES.	Population, estimated to July 1st, 1878.	Total Deaths.	Death-rate per 1,000.	Total Deaths under 5 years.	Zymotic Deaths.	Miasmatic Deaths.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Typhus and Typhoid Fever.	Diarrhœal Diseases, under Five Years.	Diarrhœal Diseases, all ages.	Consumption.	Pneumonia.	Bronchitis.	Marriages.	Births.	Still-births.
*Brooklyn.	549,438	11,075	20.15	5,294	3,192	2,988		67	363	544	59	1,011	1,165	1,509	829	365	3,091	10,747	844
*New York. ...	1,083,371	27,008	24.93	12,410			2	272	1,099	1,007	249	2,598	5,543	4,466	2,288	1,184	7,629	25,729	2,192
Chicago.....	450,000	7,422		4,017		2,129								697					
*Boston.	353,000	7,316	20.72		1,968			149	68	448	120	659	816	1,379	550	250	3,032	10,185	447
Cincinnati.....	280,000	4,823	17.22			1,193								659					
St. Louis.	500,000	6,002		2,636														4,734	404
*Pittsburg.	145,000	3,068	21.16	1,446		606								315					
Cleveland.....	162,000	2,710	16.70	1,330		820								245					
Buffalo.....	150,000	2,128	14.2																
Milwaukee.....	123,600	1,774	14.35	923	410	420	13	9	26	103	22			175	84	45			170
*Providence....	100,675	1,989	19.75	796		609		51	57	246	47		112	304	118	47			141
Baltimore.....	355,000	6,733	19.0	2,882		1,435								1,127					
New Haven....	60,000	1,081	18.0	394		229								116					
Jersey City.....	189,291	3,796	20.	1,857		1,054	7	37	59	159	38			171	69		660	1,226	
Utica.....	35,000	392	11.2	119		72			14	24	3			77	25	5	198	824	31
Richmond.	79,000	1,454	18.40	645		318								234					
Yonkers.	19,000	271	14.16					2	16	4			26	42	15	20			10
Toledo.....	50,000	657	13.14		180				36	22	16		46	64	31	20			
Reading.....	40,109	761	18.97	390		179								85					
*Charleston....	56,540	1,639	29.0	672		218								220					
*Worcester ...	52,000	1,001	19.2	404										111					
Nashville, Tenn	27,085	626	23.11	233		139								102					
St. Paul, Minn.		462		209										69					
*Montreal, Can.	134,200	4,119	30.		1,586		728												

Ἀσκληπιὸς ὁ Σωτὴρ

Χαρμα μέγ' ανθρωποισι, κακων θελκτῆρ' οδυναων.

Hymns of Homer, No. XVI.

PROLIFERATIONS.

——Medicine, the Cosmical Study.—"The human body is not to be understood without a knowledge of the entire world."—Hippocrates.

——Real Knowledge.—"The knowledge which a man can use is the only real knowledge, the only knowledge which has life and growth in it, and converts itself into practical power. The rest hangs like dust about the brain, or dries like rain-drops off the stones."—Froude, *Short Studies*, quoted in Professor Humphrey's Hunterian Oration, February 14th.

——The Metric System.—At the last meeting of the Society, Dr. Seguin, of New York, presented a short paper urging the adoption by physicians of the metric system, in recording their observations, etc. He urged the organization of a Metric League, which would, in his opinion, tend to facilitate the general use of the system. A committee was appointed to consider the recommendations of this paper, and report.

——A Child of Anak was born the other day at Seville, Ohio; a male, weighing 23¾ pounds; height, 30 inches; breast measure, 24 inches; breech, 27; head, 19; foot, 5½ in length. The mother, Mrs. Anna Swan Bates, made a good recovery. Mrs. B. is a giantess, being 7 feet 9 inches in height, while her husband, Captain M. V. Bates, is 2 inches shorter.—*Med. Record*, March 22d.

——A Medical Book that has genuine merit is sure to sell well, even in these dull times. We are informed that a certain costly work on skin diseases has found over 250 subscribers in Brooklyn and vicinity.

——The American Medical Association will hold its next annual session at Atlanta, Georgia, beginning May 6th.

——Volunteer Health Inspectors.—This is a French idea. In order that there shall be less talk and more performance among the laity, Dr. Grellety proposes that a petition be presented to the National Assembly, demanding that each member of Société d'Hygiène shall be armed with inspectorial powers, analogous to the powers given to the Société designed to suppress cruelty to brute animals. The *Lancet*, in speaking of the great need for some new sanitary departure in France, intimates that it is not at all impossible that this proposition will become *un fait accompli.*

——The Illinois Law for the protection of the public against quacks has had the effect of overstocking the quack population of Ohio and other contiguous States. Some of these *emigrés* have found their way as far East as Brooklyn.

It is stated that there were 3,600 non-graduates practicing in Illinois two years ago; of these 1,400 have left the State or ceased to practice. * * In Texas an Act has been introduced into the Legislature, and its passage is confidently expected, which will oblige each physician in the State to appear *every three years* before an Examining Board, and satisfy it that he is keeping pace with the progress of medical science. If he cannot do this he must forfeit his license to practice.

——Publications Received :

General Surgical Pathology and Therapeutics, *in Fifty-one Lectures. A Text-book for Students and Physicians.* By Dr. Theodor Billroth, Professor of Surgery in Vienna. Translated from the fourth German edition and revised from the eighth edition, by Charles E. Hackley, A.M., M.D. 8vo, pp. 873. New York: D. Appleton & Co., 549 and 551 Broadway. 1879.

Health, and How to Promote It. By Richard McSherry, M.D., Professor of Practice of Medicine, University of Maryland, etc., etc. Pp. 185. New York: D. Appleton & Co. 1879.

Health Primers:

The House and its Surroundings.

Premature Death: *Its Promotion and Prevention.*

Exercise and Training.

Alcohol: *Its Use and Abuse.* D. Appleton & Co., New York.

——The National Dispensatory.—Alfred Stillé, M.D., and John M. Maisch, Ph.D. H. C. Lea, Philadelphia, 1879; pp. 1600. Price, $6.75 in cloth; $7.50 in leather.

This important and long-expected volume has just been received, too late for a critical notice in this issue. A careful review may be expected in a future number. A copy of the book may be seen at our rooms, where subscriptions will be received.

——James Monroe Minor, M.D., formerly of this city, but for some years a resident of New York City, died at his residence, No. 5 Gramercy Park, on Sunday evening, the 23d inst., of pneumonia, after an illness of nine days. Born in Fredericksburg, Va., 64 years ago, he graduated in the literary department of the University of Virginia, and in 1837 he took his degree in medicine from the University of Pennsylvania. Resigning his commission as Passed Assistant Surgeon in the United States Navy, he married Miss Ellen Pierrepont, sister of Henry E. Pierrepont, Esq., of this city. Soon after locating in Brooklyn he was elected one of the Visiting Surgeons to the Brooklyn City Hospital, with which institution he has been connected for more than 30 years.

His sudden death is an overwhelming shock to those in this city who were his social and professional intimates. His professional skill and industry, his faithfulness and enthusiasm, his general culture, his tender and affectionate disposition, his dignified bearing and courtly manners, have, for many a year, been the charm of his associates, and must long prove to them a fragrant memory.

——Thomas McAllister, M.D., died March 19th, at his late residence, 153 Sixth Avenue, in his 50th year. He was a graduate of the College of Physicians and Surgeons in 1852. At one time he was brigade surgeon to the Fifth Brigade. The cause of fatal illness was valvular disease.

——John Maynard Woodworth, M.D., Supervising Surgeon-General of the Marine Hospital Service, died in Washington, on 14th March, after an illness of a few days. This death is an unmistakable loss to the profession and to the public service. It closes the career of a most useful man, still young in years, but whose years have been full of labors and full of results He was about 42 years old.

——Dr. Moses Brownell died suddenly at ninety-five Madison Avenue, on March 11th, at the ripe age of eighty-nine years; the Coroner's certificate assigned the death to "neuralgia of the heart." His residence in this city dated from about two and a half years ago. He was but little known to the profession here; but he had been a member of the Albany County Medical Society during many years.

——George Gilfillan died suddenly February 5th, 1879. He was born towards the close of the last century, in Killylane, County Derry, Ireland, the third son of William Gilfillan, a large and respected farmer.

From an early period of his history he selected medicine as a study, and after acquiring a thorough knowledge of the classics, he was about to enter the Medical School at Glasgow, Scotland, when sudden reverses met his father, which seemed to frustrate all his hopes and aspirations for the future. This crisis in the affairs of his father so affected the family that an elder brother resolved to emigrate, soon followed by the subject of this notice. They arrived here about the year 1826, and settled in Brooklyn.

George became a clerk in a drug store situated on the corner of Sands and Jay Streets, where he remained for several years, until, by habits of economy, he had amassed sufficient means to enter the College of Physicians and Surgeons, New York, from which he was graduated in 1834.

In the summer of 1832 Asiatic cholera raged in Brooklyn, and as the very few physicians then in existence were unable to respond to the many and urgent calls, George Gilfillan, although not a graduate, abandoned the pestle and mortar, and took to the field of practice, doing efficient and practical service in that frightful epidemic, so much so that he received the thanks of Drs. Wendall and Ball.

This circumstance of his life suddenly brought him into prominence. He continued in the practice of his chosen profession, and at the time of his graduation, nearly two years later, he had quite a large practice. His office was then located on the corner of Sands and Jay Streets. A few years after graduating he removed to the corner of Main and York Streets, then a central location, where he continued to conduct a large and lucrative general practice almost to the close of his life.

He early assisted his father to overcome the reverses which so nearly blighted his hopes and ambitions, and also took great pride, by pecuniary aid and encouragement, to forward the interests of his brothers. After seeing these in a fair way to success, he became interested in the rising members of the Cochran family (children of his only sister). The eldest, John, came to him at an early age, and under his supervision graduated in medicine from the same Alma Mater, in the year 1847. He commenced practice in the office of his uncle, but after a few years his practice grew so large that he was forced to locate himself elsewhere. His short but brilliant career was well known at that time. Then followed the late Dr. George Cochran in his office, who was again succeeded by Dr. Alex. Cochran, so that each, in their turn, with the advantages offered, had every opportunity of laying the foundation for a large practice.

He took a great interest in all his nephews, and nothing delighted him more than to see them succeed.

During his long career in practice he won the esteem of his patients by his devotion to their interests, and their gratitude by his gentle manners and skillful treatment.

He was a man of sterling integrity, of determined will, of untiring industry and of considerable executive ability.

Truth, honor and a high sense of moral dignity controlled all his dealings with his fellow-man.

Given to no vices, regular, even methodical in his habits, he consulted the preservation of a rugged constitution, which he possessed, and which sustained him to a good old age.

He was a member of the Kings County Medical Society and a life member of the Long Island Historical Society.

For many years past George Gilfillan suffered from constipation, which in later years became obstinate. This induced cerebral plethora and gastric disturbances, all of which became more aggravated as age advanced, but never prevented his driving out and attending to his duties until May 2d, 1878, when he was attacked with active cerebral congestion, with partial hemiplegia of right side. From this he almost wholly recovered in the summer, and continued to enjoy fair health up to the morning of February 5th, 1879, when he suddenly expired from cerebral hemorrhage.

He died wealthy, at the advanced age of about 82 years. George Gilfillan was never married. His remains were deposited in the family vault at Greenwood.

W. J. Gilfillan, M.D.,
William Ross, M.D., } *Committee.*

——The Regular Monthly Meetings of the Medical Society of the County of Kings are held at 8 P. M., on the third Tuesday of each month, at Everett Hall, 398 Fulton Street.

The April meeting will be held on the 15th, at which time the following papers will be presented :

Chloral Inebriety, by J. B. Mattison, M.D.

Cases Illustrating Neurotic Conditions Relieved by Wearing Spectacles, by Henry N. Read, M.D.

Jaborandi in Puerperal Convulsions, by J. H. Hunt, M.D.

——New Members.—At the March meeting the following new members were elected : M. Louise Rice, Univ. Michigan, 1874 ; R. B. Welton, Harv. Univ., 1868 ; E. F. Mordough, L. I. C. H., 1878; J. M. Harcourt, Univ. N. Y., 1874 ; Geo. Drury, L. I. C. H., 1871. Drs. J. R. Taber, 263 Ryerson St.; H. Risch, 171 17th St., and Elizabeth Ford were proposed for membership.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

OFFICERS AND COMMITTEES FOR 1879.

President.....J. S. Prout, M.D., 167 Clinton St.
Vice-President.....C. Jewett, M.D., 310 Gates Ave.
Secretary.....R. M. Wyckoff, M.D., 532 Clinton Ave.
Assistant Secretary.....J. H. Hunt, M.D., 419 Hart St.
Treasurer.....J. R. Vanderveer, M.D., 301 Carlton Ave.
Librarian.....T. R. French, M.D., 72 Greene Ave.

CENSORS.

F. W. Rockwell, M.D. (Senior Censor), 6 Lafayette Ave.
G. W. Baker, M. D.,48 Bedford Ave., E. D. B. A. Segur, M.D., 281 Henry St.
A. Hutchins, M.D., 796 De Kalb Ave. L. S. Pilcher, M.D., 4 Monroe St.

DELEGATES TO THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

(1878 to 1882.)

Drs. J. C. Shaw,	Drs. A. J. C. Skene,	Drs. E. N. Chapman,
J. D. Rushmore,	G. G. Hopkins,	J. S. Prout,
R. M. Wyckoff,	A. Mathewson,	F. W. Rockwell.

Chap. XI, Art. 2, of By-laws: "Any Member elected as Delegate to the Medical Society of the State of New York, who shall be unable to act as Delegate during two successive years, shall be considered to have vacated his position as Delegate."

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION.

Drs. Andrews,	Drs. French,	Drs. Pilcher,
Bodkin,	Garrigues,	Schapps,
F. H. Colton,	Hawley,	Shaw,
Dodge,	Hutchison,	Sherwell,
Fessenden,	Mathewson,	Westbrook.

COMMITTEES OF THE SOCIETY.

HYGIENE.

Drs. T. P. Corbally, J. Walker, W. E. Griffiths, B. Edson, A. W. Ford.

REGISTRATION.

Drs. C. H. Giberson,	Drs. W. G. Russell,	Drs. R. M. Buell,
W. E. Griffiths,	N. Matson,	R. W. Wyckoff,
J. A. Jenkins,	F. W. Rockwell.	

PUBLIC INSTRUCTION.

Drs. A. J. C. Skene, C. L. Mitchell, E. R. Squibb, J. T. Conkling, J. C. Hutchison.

PHYSICIANS' MUTUAL AID ASSOCIATION.

Drs. B. A. Segur, W. W. Reese, J. H. H. Burge, A. Hutchins, W. G. Russell.

PROCEEDINGS

OF THE

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

STATED MEETING, APRIL 15, 1879.

CHLORAL INEBRIETY.

J. B. MATTISON, M.D.

A decade has gone by since Oscar Liebreich gave to the world what has proved a precious boon to suffering humanity. During these years chloral has run the gauntlet of clinical criticism, until now, divested largely, if not entirely, of the extravagant, and, as often shown, mistaken laudation bestowed upon it during its earlier history, it has reached the goal of a remedy well tried and true, and proven itself of peerless power in varied phases of bodily ill, to which it is superfluous and foreign to the purport of this paper to direct your attention.

I desire, the rather, at the request of our late President, to invite your consideration of that aspect of the question involved in the assertion of a distinguished member of this Society, "that to be potent for good involves, in the very nature of all things, an equal potency for harm;" and though this property of chloral has in this country received little or no attention, I trust I shall be able to proffer some facts and suggestions not without interest, and, perchance, of more value than a mere cursory study of the subject might seem to demand.

In the earlier days of chloral it was asserted that one of its valuable features was an absence of all harm in its continued taking; that it pos-

sessed no power to create a so-called "habit," and that this commended it for protracted use in preference to opiates, which, as I have shown, are so fraught with danger; and even recently, in a late number of *L'Union Medicale*, Germain See says—very mistakenly, I think—"it is not possible to continue its use without provoking a distaste for it." This claim to merit, however, is largely invalid, and the fact is now well established, that the habitual use of chloral, therapeutically or otherwise, induces, in many cases, a well-marked form of disease, characterized by functional derangement so profound as to deserve for it a distinct place in the nosological calendar, and a study more thorough than it has hitherto received. Inasmuch as the ill results of its taking are strongly akin to those caused by alcohol or opium, it properly becomes one phase of inebriety, and as such I offer you some salient points touching its pathology, etiology, prognosis and treatment.

The literature of chloral inebriety is very meagre. I know of no contribution to this topic, strictly speaking, in American medical journals. In England and Germany, notably the latter, more attention has been given it, but even yet not an amount commensurate with its importance, and which it must and surely will receive. As proof of this, it may be noted that early last year the London Clinical Society appointed a committee of some of its most eminent members, Sir William Jenner, chairman, "to investigate what deleterious effects follow the prolonged and continuous use of chloral in ordinary doses." This inquiry, so germane to the subject of my paper, induced me to write to Dr. Robert Farquharson, Hon. Secretary, asking if its report had ever been made. In reply he expressed his regret that the circular letter issued had not yet elicited responses sufficient to warrant the committee in presenting a report. It will be offered, however, the present year, and those of you who keep abreast of English medical journals will doubtless find it a most valuable contribution to the literature of chloral inebriety.

After a time, varying according to individual susceptibility from a few weeks to years, a person who has been daily taking chloral, whatever the occasion or amount, begins to present deviations from health, referable to various organs, but not sufficiently often limited to one as to place its derangements invariably among the earliest sequelæ of continued taking. Inasmuch as no regular order obtains in this regard, and as scarcely a function of the body escapes more or less disturbance, I shall make no pretension to an original arrangement of symptoms, other than to note last those which seem the most important, but endeavor to give as full a recital as the limited opportunities at command have afforded me.

Digestion.—In a certain proportion of cases the earliest morbid indications relate to the digestive system. These, doubtless, are often due to

the local action of the drug, followed and kept up by its pernicious effect on the system at large. Nausea and vomiting come on; the tongue is covered with a whitish fur; the desire for food is variable, deficient and in well marked cases almost extinct, the morbid appetite seeming to feed upon itself; the breath is fetid, or gives off an odor of chloroform or alcohol; jaundice appears, though oftener there is a pallid, anæmic look from blood-vitiation; the bowels are torpid—exceptionally relaxed—and the alvine dejections are hard and peculiarly pale.

Respiration.—In some cases this function is early and peculiarly affected. The movements are diminished in frequency, and, in instances, so interfered with as to give rise to more or less dyspnœa. Hammersten experimentally produced severe dyspnœa in cats to which he had given chloral, and this symptom has been noted by Jastrowitz, Schule, Ludwig Kirn and others. A patient of the former suffered severely, and had occasional cessation of breathing. Another, of Schule's, who had long been using chloral, had marked oppression of breathing, which interfered with exercise and even speech. There was no chest complication, yet the dyspnœa persisted in spite of all treatment until the chloral was discontinued, when it entirely disappeared. Kirn says he has noted it in several cases, sometimes accompanied with a feeling of heaviness and anxiety, and cites the following case mentioned to him by a prominent physician: "This gentleman was summoned in consultation to a lady prostrated by long sufferings, who had of late suffered from attacks of extreme dyspnœa, which had increased. At the same time the face was swollen, the facial muscles paralyzed, and there were also all the signs of cerebral effusion. Every remedy had failed, and the patient seemed on the brink of the grave. The physicians, therefore, recommended the discontinuance of a daily dose of 45 grains of chloral, which had been given as a hypnotic, whereupon all these highly alarming symptoms vanished in an almost magical way, the cerebral disturbance ceased and the respiration quickly resumed its normal type." Kirn explains this by assuming that chloral, acting on the vaso-motor centre, produces a paralyzing influence, extending to the peripheral branches of the affected nerves and causing lung hyperæmia, which contra-indicates its use in morbid conditions tending to pulmonary congestion.

Hearing and Vision.—These senses are often impaired—the former dulled, with tinnitus aurium, and the latter obscured or lost. Dr. Keyser, of Philadelphia, reported the case of a gentleman accustomed to 60 and 80 grain doses of chloral, who suddenly became blind. Ophthalmoscopic examination revealed great retinal anæmia. The drug was discontinued, and in a few days sight was restored.

Dr. Burke Haywood, of North Carolina, observed an elderly man,

who, after some weeks' use of chloral, began to complain of dimmed vision, which persisted and increased till the drug was withdrawn, when it gradually disappeared. Drs. Benjamin Lee, Laurence Turnbull and others have also noted visual derangement following long usage.

Heart.—The prolonged use of chloral begets a debilitated cardiac condition, evidenced by weak, rapid and irregular pulse, feeble heart sounds and tendency to syncope. This results from combined causes—the devitalized blood-stimulus, the impaired general muscular force and the disentoned nerve-supply. It is fair to infer that a part cause of the cerebral anæmia, inducing mental disturbance, proceeds from lessened heart-power, and that this is also a factor in the impaired nutrition of the extremities, to which reference will hereafter be made.

Liver.—Hepatic disturbance is indicated by a jaundiced condition, and peculiar gray or ash-colored evacuations. Richardson attributes this to the changed condition of the blood similar to that seen in scurvy. I am not aware that any structural change in this organ has been noted.

Kidneys.—Chas. Orton (*Edin. Med. Jour.*, Nov., 1876) asserts that congestion of the kidneys may and almost invariably does follow the use of chloral. If this be true it is unnecessary to detail the manifestations referable to morbid renal action sequeling continued taking. They will be incidentally alluded to hereafter.

Muscular System.—The habitual use of chloral acts injuriously on this system through the medium of disturbed nervous influence, under which heading it will be more appropriately and fully considered. I desire, however, in this connection, to ask your special attention to two symptoms which are, in some instances, very prominent, and which possess an especial significance from a diagnostic stand-point, inasmuch as they sometimes appear early, their true cause frequently overlooked, and their proper appreciation a point of decided importance in distinguishing, in one, a mere functional disorder from an apparently grave neurotic lesion.

I refer, first, to peculiar pains in the limbs, simulating neuralgia or rheumatism, yet unlike the former, as they are not limited to the course of the nerve, and differing from the latter in not being exactly *in* the joints, but rather *girdling* the limb or finger just above or below them, without pain on pressure, and unaggravated by movement. Their diagnostic import is that they may be mistaken for the diseases they resemble, and their origin being unsuspected, prove very obstinate and unyielding to treatment. Similar pains are occasionally noted in confirmed alcoholics, and in cases of chronic chloroform narcosis. Anstie thought the latter fact afforded some support to the theory that chloral acts by evolving chloroform in the blood. He expressed his opinion that many cases of supposed rheumatic or neuralgic pain would be found,

on careful investigation, due to chloral-taking, and cited the following case, in which this symptom was prominent:

A. B., physician. Began the use of chloral Feb. 1st, 1873, in 30-grain doses, to procure sleep when kept awake by great anxieties. In two months noticed inflamed and weakened eyes, with scalding tears. Continued the drug, however, sometimes increasing the dose and repeating it. From April to August the usual amount was one drachm. In this latter month commenced using it during the day, one to three times. About Dec. 1st began to realize the amount he was daily taking, and found it half an ounce, sometimes more. He now began to complain of severe general pains, especially about the joints, which grew worse in the moist air of London. There was no tenderness and they were not increased by motion. Chloral did not relieve them, except when it put him to sleep. Soon after this he made a mistake in his dose, using from a strong solution, which brought on the pains with frightful severity, and Dr. Anstie was summoned. He found him with suffused eyes, haggard features, sleepless, peculiar broken speech, lower extremities partially paralyzed, with loss of co-ordinating power and excessive joint pains. An examination disclosed he had taken more than an ounce of chloral the preceding day. It was at once withdrawn; cannabis indica used to relieve the nervous disturbance; tonics ordered; and under this treatment he recovered.

Dr. Lee and others have observed these pains in the wrists and elsewhere.

The other special feature is partial paraplegia. The loss of power in the lower extremities is sometimes very marked, and strongly suspicious of serious spinal lesion. Brown-Sequard "relates two cases of mania, with obstinate insomnia, in which he gave five grains twice a day to one, and double that to the other, followed by 30 to 40 grains at night. After seven or eight weeks of this treatment, the patients had become so feeble as to be unable to walk or to put one foot before the other. This rapidly disappeared when the chloral was withdrawn." This symptom was notable in some of the cases of chloral inebriety we shall offer; and the following, observed by Dr. Anstie, is instructive:

He was called, in consultation, to a lady, aged 38, with symptoms of partial paraplegia of obscure origin. Reflex uterine irritation was mentioned as a cause, but the suggestion was not accepted. The regular medical attendant then suggested that nightly doses of chloral, which the patient had for some time been taking to secure sleep and allay mental anxiety, might be a factor in the paralytic trouble. This was also rejected, and as some sedative seemed called for, the chloral continued. The lady, however, failed to improve from the treatment recommended, and after one or two consultations a different physician was called. He accepted the chloral hypothesis, the sleeping draught was discontinued, and she speedily lost her paraplegia.

Anstie observed that the case afforded him some practical but rather rueful reflections.

Nervous System.—As would be expected from the nature and peculiar tendency of chloral, the nervous system shares largely in the ill effects of habitual using, varying from symptoms so slight as to cause little inconvenience to those of marked importance; from slight facial erythema—due to vaso-motor paralysis—to almost entire incapacity for bodily effort,

from lack of co-ordinating power and motor strength. There may be anæsthesia, hyperæsthesia—oftener the latter—or both; tremors of the tongue and muscles; sub-normal temperature—97°, or under; chilliness; profuse sweats, sometimes cold; again, a peculiarly dry skin; irregular, wandering pains; general irritability; restlessness; insomnia; exhaustion; vertigo; inability to stand erect, with tendency to fall forward, as in ataxic trouble; lack of co-ordinating power, so as to be unable to write, whistle, button clothing, etc.; facial paralysis, and progressive failure of motor power to entire paraplegia.

Blood.—It might not, at first, be thought that chloral would have any peculiarly ill effect on the blood, classed as it is among nervines, and having a special therapeutic application to neurotic disorders; but when we consider its composition, and that much of its influence is, admitting a largely accepted theory, due to changes effected in the circulating fluid, this result will not be surprising; but, beyond all theorizing, clinical facts attest conclusively its pernicious effects in this direction. According to Dr. B. W. Richardson, if chloral is exposed to the action of an alkali, chloroform and formic acid are generated. This taking place in the blood, formate of soda is produced, the blood becomes charged with it, the red corpuscles are disorganized, and a condition created like that observed in scurvy. Direct chemical irritation and disturbed vaso-motor influence are auxiliary factors, and as a result there are pallor, partial or general œdema, and various lesions of the mucous and cutaneous surfaces. Of the former, conjunctival smarting, redness and swelling; spongy, tender and ulcerated gums; tongue blistered and excoriated, with lips and lining membrane of mouth sore and encrusted. Of the skin, there may be erythema; roseolar, papular, pustular, dry or moist scaly eruptions; abscesses; painful, tender, erythematous inflammation, with ulceration about the finger-ends, distinct hemorrhagic purpura, with falling of the hair, and loss of toe and finger nails.

The following cases, noted by Crichton Browne, furnish striking proof of the serious blood changes sometimes caused by chloral:

A. B.; female; æt. 69. Periodical mania. Was ordered 20 grs. daily. On the fourth day red spots appeared on chest and shoulders, extending, on the sixth, over trunk and limbs, livid spots and red patches alternating. Lips and lining membrane of mouth became excoriated, gums spongy, tongue blistered and ulcerated, and breath fetid. Great depression; pulse, 120. On the eleventh day the mouth ulceration had extended, and the lips were covered with crusts. On the fifteenth day general desquamation set in, with skin fissures on the sacrum and about joints. Convalescence then began and health returned.

C. D.; female; æt. 46. Dementia. Was ordered 15 grs. chloral, three times daily. On the nineteenth day purple red spots appeared on the left elbow. On the day following these extended to the shoulders and forearms. On the twenty-first day livid

spots appeared on the face; next day on the abdomen, legs and along the spinal column. With these were great prostration; somnolence; weak, excitable pulse; sore lips and heavily coated tongue. On the twenty-third day the livid patches had extended in all directions; symptoms of pulmonary congestion came on; the debility increased, and death, preceded by several fainting fits, occurred on the twenty-sixth day.

The following case is reported by Ludwig Kirn:

E. F.; young male. Mania. Ordered chloral, 45 to 60 grs. nightly. On the ninth day red spots appeared in groups, becoming confluent. On the twentieth day pulse and temperature increased, till, on the twenty-third, the latter rose to $106\frac{7}{10}^{\circ}$. Quinine freely and frequently, with baths, produced no effect. Œdema of the face, cheeks, eyelids and ears now occurred. The skin became, in turn, covered with scaly icthyoses, and casting off of great epidermal sheaths from all parts of the body. On the forty-third day large abscesses appeared over the shoulders and armpits; and still later there was a remarkable loss of hair, and falling off of the nails of the hands and feet. These occurred during a period of ten weeks, the chloral meanwhile being continued, as its influence was not suspected. "The symptoms began, after a certain saturation had been produced by accumulation, to spread further and further, and finally to assume the picture of a chronic blood-poisoning."

Prof. Nathan R. Smith, of Baltimore, reported in the *Boston Med. Journal*, July 21st, 1871, two cases—one a physician, æt. 76, who had used chloral daily, in liberal doses, for four months; and the other a lady, æt. 23, who had employed it nightly, for some time, as a hypnotic—in each of whom it produced an erythematous inflammation, with desquamation and ulceration about the borders of the finger nails, attended with pain and tenderness on pressure. He expressed his opinion that in some cases its continued taking will cause a toxœmia like that from the long use of ergot.

I am indebted to the courtesy of Dr. James G. Kiernan, late Assistant Physician of the New York City Asylum for the Insane, for the following observations, which have never been published, and which seem to me especially interesting and valuable:

Case 1.—J. B. S.; sailor. Acute mania. Ordered chloral, 35 grains per diem, gradually increased to 120. Two weeks after beginning of larger dose he had congested conjunctiva, bloated face, widely dilated pupils, feebly responsive to light, and roseolar eruption on face and neck. The mania subsiding, the chloral was discontinued, and the conjunctivitis, etc., disappeared. The same phenomena were noted in ten cases of a similar character.

Case 2.—P. J. B.; æt. 25. Very violent and excited. Three months' use of chloral, in doses before mentioned, developed conjunctivitis, œdema of face and neck, with constant coldness of extremities, all of which subsided on withdrawal of the chloral. Similar symptoms were noticed in five cases of a like character.

Case 3.—G. H.; æt. 36. General paresis; much maniacal excitement. Ordered 80 grains of chloral daily, resulting in increased excitability, congestion of head and face, *contracted* pupils, dyspnœa and roseolar eruption, all subsiding on disuse of the drug. The same results were noted in three similar cases.

Case 4.—Thos. R.; general paresis; much depression, alternating with elation.

Was placed under chloral, 30 grains per diem, increasing to 120. Developed conjunctivitis, diplopia, facial œdema, cold extremities, inarticulate loquacity, with desquamation of cuticle and ulceration around nails, all of which disappeared on withdrawal of the chloral. In twenty-five similar cases the same phenomena were noted.

In thirty cases of melancholia symptoms analogous to those in Case 1 were excited. Dr. Kiernan observes that conjunctival congestion and facial œdema follow so often the use of chloral as to be considered its constitutional effects.

Objection may be made to these cases that they are not typical of chloral inebriety, and that the morbid effects were probably due to some impurity of the drug, rather than the result of protracted using. The latter is not likely, it being improbable that a spurious article would be employed by the gentlemen mentioned. Dr. Kiernan informs me that he used Schering's crystals, and Powers and Weightman's. The first objection is unfounded, inasmuch as many of the symptoms cited are met with in chronic chloralism, and may, therefore, very properly be included in its symptomatology.

Brain.—Impaired mental power invariably follows the habitual use of chloral if it be sufficiently prolonged, though the ill results in this regard vary largely, according to individual susceptibility. In some they appear in a few months, in others not for years, and range from slight irritability of temper or loss of memory, to complete imbecility or dementia. Chloral acts more disastrously in this regard than opium or alcohol. The evidences of impaired intellectual strength and moral perversion or enfeeblement appear earlier and are more profound. There are fretful, irritable temper, aversion to friends and society, deceitfulness, loss of memory, feeble reasoning power, hallucinations of sight and sound, varied delusions, delirium, mania, suicidal or homicidal propensity, listless, vacant expression, aimless wanderings, hebetude, stupor, loss of self-respect, obscenity, intense melancholia, garrulity, idiocy, complete insanity.

The following, only one of which has been published, are well-marked cases of chloral inebriety:

A. B., physician. Was ruddy, well-built and quick; began the use of chloral to relieve insomnia, gradually increasing his quantity per diem from 18 to 70 grains; in three weeks began to complain of conjunctival trouble and had some œdema of face; lost his ruddy complexion and had a washed-out appearance of the skin; dilated pupils; clear, almost transparent sclerotica; great stupor, requiring a long time to think; sexual torpor, and ulceration of toes and fingers.

This condition of affairs persisted for eight months, when he was placed under treatment. The chloral was entirely withdrawn. In 24 hours marked signs of reflex irritation came on; restlessness, insomnia, garrulity, and all symptoms of delirium tremens except hallucinations and delusions, which, however, could scarcely be noted, ow-

ing to his inarticulate speech. Conium was employed as a sedative, and tonics, with full diet. The reflex irritability persisted for a week, then improvement and recovery within a month.

C. D., female; æt. 19. Took chloral by advice of a physician; found her usual fresh complexion become dull and pasty; had roseola on face; pupils so widely dilated she could not see, and much swelling of hands around nails. After six months treatment was instituted; the drug was peremptorily abandoned, with results—degree and extent—as in case of A. B. The same measures were used to control the reflex manifestations, and case was dismissed, cured, in four weeks.

E. F., female; æt. 33; neuralgia. Was professionally ordered chloral; continued its use, increasing the daily quantity from 18 to 150 grains, resulting in great pallor and swelling of face; widely dilated pupils; double vision; inarticulate loquacity; stupor amounting almost to dementia; staggering gait and ulcers on fingers. The disease persisted for five months, then treated by immediate disuse of the chloral, followed by all the symptoms of exaggerated sensibility noted in the preceding cases, which were met and controlled by fluid extract hyos. and laudanum, one drachm doses each, every six hours. The effect was decided, the irritation subsiding in three or four days; then a tonic course, and recovery in a month.—Dr. James G. Kiernan, N. Y. City.

G. H., physician; æt. 50. Early in 1875 began to use chloral for the relief of insomnia and mental disturbance, caused by harassing business cares; the amount varied from 20 to 60 grains nightly, sometimes repeated. This was continued two years, when the gentleman who has kindly given me details of the case was called to see him. He found him "muffled up," head and all, in bed, complaining of chilliness and racking, wandering pains in bones; pulse rapid and weak; temperature, 98°; breath offensive; bowels torpid, with clay-colored evacuations; no appetite; hyperæsthesia; ecchymoses and vibices resembling scurvy on legs; loss of co-ordinating; marked failure of memory; very loquacious and intensely despondent; with obstinate insomnia, only relieved by continued taking of the drug that had caused all his misfortune, and which brought only a troubled slumber, laden with dreams horrible beyond description. The most prominent features of the case were his extreme loquacity and profound melancholia. The chloral was withdrawn, and a nourishing diet—liquid food and eggs, with stimulants, quinine and Percy's Vitalized Phosphates, ordered. To secure sleep various hypnotics were used, without much success; but two-drachm doses of fluid extract lactucarium, every second hour, seemed of service. Under this treatment he entirely recovered in about a month, and has remained well.—Dr. C. Pollock, Donnelsville, Ohio.

I. J., male; æt. 41. Recovered with neuralgia of arms and shoulders from a two months' attack of malaria; sleeplessness came on, for which his physician ordered chloral, which, of all hypnotics used, seemed most of service. Was taken at first three nights a week, but subsequently more frequently and habitually. At the end of one year he was a partial wreck, mind and body, and deemed unfit for business. Appetite was poor; tongue coated; breath strongly odorous of chloral or brandy—which latter he used when the former was not obtainable; secretions irregular; free sweating; constipation alternating with diarrhœa; liver enlarged; cardiac action weak and irregular; was partially anæsthetic and had hyperæsthesia; delirious at times, and had marked delusions regarding his ability to take care of himself and to reason correctly on various subjects, considering himself very clever, and insisted he only used chloral to control his neuralgia. Could not be induced to abandon it; grew worse; partial paralysis came on; loss of co-ordinating power followed; memory failed; hearing grew dull, and he was removed to an inebriate asylum. For ten days after admission he

was delirious, destructive to clothing, and very obscene; then began to improve, and six months later was recovered; but never forgetting the quiet and rest that came to him from chloral, could not and would not resist his morbid desire. He went out, drank brandy and then chloral, was again sent to an asylum, and died six months later. —Dr. T. D. Crothers, Sup't Walnut Hill Inebriate Asylum, Hartford, Conn.

K. L., male, æt. 47. In 1870 was ordered, professionally, a mixture of bromide of potassium and chloral for relief of spasmodic retention of urine. It accomplished the object, but created a demand for its continuance, and for six years he took 60 grains of each drug every day, with no apparent ill result, though he confessed it had enslaved him to some extent, as he felt a desire for its effect somewhat akin to that of the habitual alcohol tippler. At the end of this time he took chloral alone—prescribed for an attack of bronchitis. His previous indulgence required a full dose to produce the desired effect, so that his initial taking was 60 grains daily, gradually increasing to triple that quantity. He carried the chloral solution with him, taking a draught containing a maximum amount of 10 grains every half hour or hour, and securing the desired effect in five or ten minutes, which continued from thirty to sixty minutes. Ill results were soon manifest. Anorexia, nausea and vomiting, with acid eructations; jaundice, with hæmorrhoids; was insomnic, the chloral bringing no sleep, but a soothing sense of comfort; lassitude, and marked inaptitude for mental or bodily work, with a mental irritability that only chloral would allay. His moral sense became much impaired; was deceitful; had morbid dislike of nearest friends; was irritable and passionate, sometimes to threatened violence; would wander aimlessly about the streets and know nothing of his wanderings; grew lost to duty and self-respect—in fact, morally insane. After a time he suddenly abandoned chloral and betook himself to whisky; but the substitution did not suffice to prevent the development of intense reflex irritation from the withdrawal of the long-accustomed drug, symptoms of which began in twenty-four hours. Diarrhœa set in, with copious alvine hemorrhage; delusions and hallucinations prominent; had insomnia, and, when sleeping, frightful dreams; became excited, unmanageable and threatened self-destruction. The varied manifestations of mental and physical disturbance increased, and culminated in three well-marked epileptiform convulsions of great severity, following each other every fourth hour, during which he was unconscious, had spasmodic arrest of breathing, foamed at mouth and bit his tongue severely. Rallying from these, he was removed to an insane asylum.

On admission appeared prematurely old and broken down; very weak, anæmic, unable to speak above an undertone, and scarcely able to walk; expression blank and vacant; eyes dull and meaningless. The chief mental symptom was great feebleness; was silly, childish and almost imbecile in manner; no excitement; rather slight depression; was very emotional—crying and laughing without cause. Took no interest in things about him. His replies to questions were rambling, disconnected and incoherent; was unable to converse to any extent or carry out a consecutive line of thought; memory almost lost; could not tell his age or where he came from. Had delusions on various subjects; thought the queen had a special interest in him.

There were persistent muscular tremors of both extremities; cause great unsteadiness, requiring assistance to walk, and minor co-ordinative acts, as writing and whistling, he was utterly unable to perform. Tongue was tremulous, twitchings at edges and pointed decidedly to the right side. Articulation was thick and indistinct; pupils equal, dilated, irregular edges, and insensible. There was partial facial paralysis of the right side; hyperæsthesia, insomnia and exhaustion, but no pain or cutaneous eruption. Muscles poor and flabby; conjunctiva yellow; respiration normal; pulse 67, weak and thready; temperature 97°; specific gravity of urine 1005; no albumen,

sugar or casts. Could only urinate at night, then in large quantity, clear and limpid, like hysteria.

The chloral was entirely withdrawn, and no sedative allowed, despite earnest pleading of patient. For several nights he scarcely slept, but had short snatches during the day. Was ordered a tonic mixture containing strychnine, strong diet and exercise in open air. The appetite for food returned slowly, but he gained rapidly in flesh and appearance. Pulse stronger, and temperature up to 98.4° in a few days. The tremors and paralysis disappeared in an astonishingly short time, the indistinct speech and facial paresis leaving first, while reflex action and sensation more gradually recovered. Pupils remained dilated for three weeks, but became regular and contracted under stimulus of light in a few days. The delusions were dissipated in a day or two; memory and coherence soon returned, but without recollection of events during the latter part of his illness. There was a short stage of stupor and confusion, then regained strength of intellect by degrees, and emotions and affections resumed their normal condition. Was dismissed, recovered, three months after admission.—Mr. T. Inglis, Royal Edinburgh Asylum.—*Edinburgh Medical Journal, September, 1877.*

Etiology.—Inebriety from chloral, like that of opium and alcohol, proceeds from one of two causes—its professional employment till the morbid demand for constant use is created, or else its self-administration till the same result is reached. I have expressed my belief that the share of professional responsibility in the production of opium inebriety is very great, and have no reason to change that opinion. With alcohol and chloral I think it less. Chloral seems to possess a special adaptability for self-taking; it has such a wonderful power in bringing sleep and freedom from mental worry and jar, the reverse of which is so often prominent in almost every department of active life.

Again, I believe the laity look upon chloral with less distrust and as less dangerous than opium; and therefore are more disposed, when in pain or sleepless, to act as their own medical advisers, which, in the present lax restrictions regarding the sale of it and other narcotics, can be accomplished with little or no difficulty.

Then, too, chloral is more efficient than opium in overcoming the tremors, wakefulness and general dilapidation following a drunken bout, and as such may be used to an extent establishing an additional form of inebriety, although there is a ludicrous lack of truth in the assertion of a Dutch journal, some time ago, "that a large proportion of the so-called 'drinks' which are used in America contain chloral hydrate"!!!

Dr. Richardson asserts that six months after the introduction of chloral in England, its use, outside the profession, had become quite extensive, and in 1871 he felt impelled to make a report on the subject before the British Association for the Advancement of Science.

Dr. Wm. B. Atkinson states "that when in California, in 1871, he found it in almost universal use. Persons with no pretense to any medical knowledge were constantly employing it in large doses for the relief

of neuralgic pains." Dr. Squibb, however, expresses his belief that the non-professional use of it has largely diminished of late years. Doubtless its not infrequently fatal effects have had much to do with the decrease; and it will prove fortunate if, even at such expense, its use be relegated to professional hands, where it properly belongs.

One reputed quality of opium and alcohol, which is sometimes a pretext for indulgence and a factor in their respective forms of inebriety, does not pertain to chloral—that is, the power to stimulate mental activity. It dulls and depresses, or, if otherwise, the latter is early and transient.

Prognosis.—The prognosis of chloral inebriety is variable. Dr. T. D. Crothers asserts it unfavorable. The disease is less frequent than opium and much more infrequent than alcoholic inebriety, and I am not aware of any data as to the proportion of recoveries. The danger is a more or less speedy relapse. Much will depend on the length and degree of addiction, freedom from painful organic complication, absence of alcohol or opium taking, individual constitution, and surroundings subsequent to cure.

Another point to be noted is that chloral habitués are exposed to a special danger. While the habitual use of opium admits of its gradual increase without risk, so that enormous doses can be taken with impunity, that of chloral is sometimes the reverse, and serious effects have followed the use of a smaller dose than the patient had for some time been accustomed to taking.

It must not be supposed that all habitual chloral-takers are inebriates, strictly speaking. The subject, like that of alcohol and opium using, has a double aspect—a vice and a disease. A person who habitually indulges in either of these agents, and yet retains sufficient will-power to abandon them, is simply vicious—a proper object of moral suasion; but when volition ends, disease—inebriety—begins.

Treatment.—Either of two methods will succeed in the treatment of this affection—entire and immediate chloral withdrawal, or its more gradual abandonment. The same objection to the former plan presents as in opium inebriety; it causes a profound shock to the system, intense reflex irritation, and great distress of mind and body. By the latter method the same result is reached with much less suffering, and I regard it wiser and more humane. The following case illustrates peremptory abandonment:

A. B.; æt. 35; free liver. Was induced to abandon alcoholic liquors, in which he had largely indulged. Became very nervous and wakeful, for which he was professionally ordered chloral, 20 to 30 grains at bed-time. The effect was very satisfactory, and he continued its use, apart from medical advice, increasing the quantity to 60 and

90 grains daily. This was persisted in four months, the dose then lessened slightly, and finally stopped abruptly. A characteristic attack of delirium tremens soon set in, with marked hallucinations and great insomnia. The pulse was frequent and feeble; nausea, anorexia, loaded tongue, profuse sweating, and much muscular prostration. There was a notable tendency to getting up and roaming around, though it greatly fatigued him, and the services of an attendant were required to prevent his escaping from the room. Under full diet, small doses of morphia and a moderate allowance of alcohol, he slowly but fully recovered.

If the heroic plan be adopted, the nervous disturbance may be expected to subside in from four to seven days. To lessen it, hypodermic morphia, Indian hemp, hyoscyamus, conium, the bromides, hot baths and other nervines may be employed. It is important to remember that after habitual indulgence in opium or chloral, much larger doses than usual of other sedatives are essential to produce any effect. The nervous system seems to acquire a special tolerance that renders ordinary doses absolutely inert.

With the sedative treatment must be used a tonic course, especially strychnine, as a nerve-strengthener, and iron, preferably the mur. tinct., to enrich the impoverished blood. The observations of Keyes, Thompson and others would seem to favor the use of hydrarg bi. chlor. as an additional agent in restoring the red corpuscles. Full nourishing diet, electricity, out-of-door exercise and cheerful social surroundings are essential roborative auxiliaries.

When the inroads on the system are not very marked, and especially where there is still retained a good degree of heart-power, a method of treatment we have employed with specially good results in opium inebriety—details of which will be found in the next (June) number of the *Quarterly Journal of Inebriety*—may be used with the full assurance of success.

If the more gradual withdrawal be decided upon, the daily supply should be at once reduced one-third, followed by a more or less rapid decrease, according to the discomfort attending. When the minimum taking is reached, some irritation will usually be met with, to be overcome by a minor degree of the sedative treatment already suggested.

Subsequent to cure, care is essential to surround the patient with circumstances favoring a continuance in well-doing.

CASES OF NEUROTIC DISTURBANCE RELIEVED BY GLASSES.

BY H. N. READ, M.D.

Specialists are well aware of the severe and obstinate neuralgia, and disturbed nervous functions generally, caused by errors of refraction and perversion of vision, though the general practitioner has often to grope to a knowledge of these cases through much trouble, assistance being found only, as a rule, in the special treatises on ophthalmology—works usually little consulted by the profession at large. Asthenopia, according to Brudenell Carter, is a fruitful source of these functional nervous disorders, and if not recognized the disturbances continue to grow worse and worse, to the despair of both physician and patient, all remedies proving useless. "The symptoms of asthenopia in the young subject," says Carter—"Diseases of the Eye," p. 547—"are very characteristic. There is, in the first place, good vision of distant objects, seldom V=1 when scientifically tested, but enough to convince stupid parents and blundering school-teachers that 'the child can see very well if he pleases.' This distant vision, such as it is, is the result of strenuous accommodation; and when any attempt is made to read, or to look steadily at near and small objects, the additional effort, even if it can be made at all, cannot be sustained. Sometimes small type cannot be deciphered, sometimes a few words or lines can be deciphered, and then all becomes indistinct. There is a marked tendency to compress the eyeballs by strong action of the orbicular muscles, or by application of a hand outside the lids, and the resulting gestures are not to be mistaken. After such momentary pressure the hypermetrope can make a fresh commencement; but before long everything near to him grows dim, and each period of renewed activity will be shorter than that which preceded it. Perseverance in effort will render the eyes painful and congested, and will often produce considerable lachrymation, so that long-continued perseverance becomes impossible.

Until quite recent times the ordinary fate of a hypermetropic child was to be the continual victim of unmerited punishments in the schoolroom, and to be compelled, in after life, to follow some occupation requiring distant vision only. The late Dr. McKenzie, of Glasgow, for example, was fond of advising asthenopic men to become sheep-farmers in Australia; and it was not until Stellwag von Carion discovered the cause of the affection, and until Donders fully worked out the problems

connected with it, that any advice materially better could be given, except in those cases in which the defect is complicated with imperfect retinal development.

We now, by the use of spectacles, place the hypermetrope upon a footing of equality with the rest of mankind, and enable him, in the phrase once addressed to me by a grateful patient, "to pursue ordinary avocations, and to forget that he has eyes." A case occurring in my practice, fully exemplifying the foregoing remarks, and entirely and permanently relieved by glasses, forms the basis of this paper, which is entirely clinical in its scope.

Miss S., a young lady from Massachusetts; while on a visit to a married sister in this city was seized with a violent convulsion about nine o'clock in the evening. Being sent for, I arrived shortly after her seizure, and found her in strong convulsions, held down on the bed by the united efforts of three or four persons. She frothed at the mouth, the teeth being clenched; threw herself about on the bed, striking the back of the head repeatedly, and at intervals gave expression to a sharp cry, accompanied with the words, "Oh, my head!" The eyes were partly open, with the pupils slightly dilated, and opisthotonos present in a slight degree. I was told that she had been feeling languid all day, and about dusk had complained of a violent headache, which had increased in severity till she "took the fit." Chloroform was administered, and she was quieted. On calling the next day, I found her moving and tossing about, almost unconscious, yet when spoken to in a loud tone, would still complain of a dreadful pain in the head. Morph. sulph., one-fourth grain, with atrop. sulph., one-sixtieth grain, were injected hypodermically, and repeated again in the evening, to procure quiet. She remained in this semi-conscious state two days and nights, and on the third morning I found her conscious, but quite weak, exhibiting great intolerance to light, and still complaining of dull pain in the head. From herself and family I then obtained the following history. (At the time seen she was eighteen years old, and was remarkably well developed and fine-looking, capable of great physical exertion.) Her family are all vigorous and long-lived; no inherited disease of any kind known, and neither hysteria nor epilepsy in any branches of the connection. She was considered a bright child, and was sent to school at about nine years of age; but although thought to be quite quick, she never did well at school, the teachers thinking that she was indisposed to learn and would not try. As a young child she was very healthy; but when she was nearly ten years old, after she had been at school nearly a year, she first began to complain of her head; would frequently have attacks of headache so violent as to keep her in the house for several days. The attacks increased

in severity and frequency as she grew older, and she was placed under the care of the family physician, without, however, experiencing any benefit.

When she was fourteen years old she had her first "fit," being taken after preparing for a school examination. Up till this time the opinion entertained by the teachers, parents, and, from what I could gather, the physician, too, was that most of what she complained of was "put on," because she did not like study and the confinement of school. After the fit, however, her parents became alarmed, and took her from school, and sought the advice of a physician of Boston. He thought that the convulsion indicated the approach of the catamenia, and that on the appearance of the menses she would "grow out of it."

The menstrual flow made its appearance this year, when she was nearly fifteen; was very profuse, and was ushered in by a violent convulsive seizure, similar to the one I saw her in and which has been described. So far from improving, however, she got worse after the catamenia became established, and nearly every month had from one to three of her "fits," more or less severe. From this, up till the time I saw her, her condition has been unchanged—if anything, growing gradually worse. During this time she has been under the care of no less than three well known physicians, besides trying homœopathy fully. The diagnosis made I could not learn; but the different kinds of treatment she had been subjected to seemed to have exhausted the catalogue of therapeutics, including electricity, baths of various kinds and change of air.

On examining her, I found her, as before stated, remarkably robust and healthy, with good appetite and digestion, sleeping well, heart, lungs and kidneys normal. The only thing complained of was the intense suffering from neuralgic headaches, occurring once a week or ten days, and the convulsions, which occurred from once in six weeks to three times a month. The effect of continued suffering on the mind of the patient was very unhappy, and naturally of a bright and cheerful disposition, she had become gloomy and despondent—had been compelled to give up society entirely, and had become convinced that she was incurable. Her family, strange to say, still clung to the idea that she gave way to her feelings too much, and that she could control her symptoms if she chose—that she was "nervous" and "hysterical." A knowledge of this belief in the minds of her friends contributed still further to aggravate the unhappiness of the patient. Conscious of her suffering, of the inability to help herself, and seeing her sufferings made light of or disbelieved in entirely, she was fast becoming morbid and utterly miserable.

Thinking that there might be some abnormal uterine condition, I made a careful examination, with negative results. She remained under my care nearly a month without my being able to make a diagnosis in her case, and, naturally, to treat her intelligently. The usual anodynes were given to relieve pain, and she was given Brown-Sequard's mixture of the bromides, more empirically than from any valid reason. On inspecting her eyes one day—as she complained of intolerance of light after an attack—I noticed abnormal convexity of the cornea, which led me to ask if she was near-sighted. She replied in the affirmative, and also thought that some of her attacks of pain began in the eyes. I learned, too, that her eyes had never been examined with any reference to a defect in vision. Thinking that this trouble might have something to do with her general condition, and desiring also to have an ophthalmoscopic examination with reference to the cerebral circulation, I sent her with a note to Dr. Prout, explaining her condition, and asking him to examine her eyes. I was, however, far from suspecting that the hypermetropia was the sole cause of all her disorders. Dr. P. examined her, made the diagnosis of hypermetropia with hypermetropic astigmatism, and recommended the glasses suitable for her condition. His notes of the case are as follows:

"Miss S—, Natick, Mass. Hypermetropia, with hypermetropic astigmatism. When she uses her eyes she has frontal pains, etc.; thinks she is near-sighted. With ophthalmoscope find no pathological changes, but hypermetropia in each eye of about $\frac{1}{10}$. She reads 4 of Snellen at 4 to 10 inches with right, and 4½ to 20 inches with left eye. Vision, right eye, $\frac{16}{40}$, which is improved with +12 spherical glass to $\frac{16}{25}$; reads 2 Snellen 10½ to 16 inches. Adding +60 cyl. axis 10°, vision improved to $\frac{16}{16}$. Left eye, V = $\frac{16}{25}$, which is brought up by +14 spher. to $\frac{16}{16}$ minus —and she reads Snellen 1 at 7 to 11 inches, adding +60 cyl. axis 180° V=$\frac{16}{16}$ full. As she reads well with +14, they are prescribed for constant wear. She was told that she might need stronger glasses in time."

The case passed from under my charge at this time, and indeed from all physicians. She left for home shortly after, and in a letter to me, written a month after, she told me that she had experienced entire and permanent relief from her neuralgic headaches, and convulsions also. At three months I again heard from her to the same effect; and a communication from her mother, six months after, relates that from the time of wearing the glasses her daughter "had been like a new creature," having had not the slightest return of any of her old troubles. It is three years now since she was given the glasses, and the cure is complete. The patient reads, writes, sews, goes into society—in short, as

she herself puts it, "acts just like any one else." I was somewhat consoled for my failure to make a diagnosis in the case by the narration of a case in Carter's work, of a young man reading for his degree at Oxford, who was thought to have some obscure brain disease, and after months of treatment by some of the most eminent medical men in London, with no beneficial results, actually gave up all thoughts of entering his profession and of marrying, and went to Australia—but all to no purpose. Finally an ophthalmoscopic examination revealed hypermetropic astigmatism; suitable glasses were prescribed, the use of which was followed by prompt and permanent cure, and in a comparatively short time the patient was able to resume the business and social relations he had been debarred from.

My second case, not nearly so severe a one as that given, but equally satisfactory as to the relief given by glasses, was that of Miss I. H., æt. 27. Placed herself under my care for treatment of neuralgia, and obscure pains in eyes, back of head and neck. Gives a good family history, and has not herself ever been sick in bed, that she remembers. Has good health in every respect but the one mentioned. All the different functions of the body performed normally, and has a healthy, though slightly anæmic appearance. The pains complained of generally commenced in the forehead, eyes or temples, and extended back through the head, and often down the neck. Sometimes they lasted two or three days, so severe as to compel her to lie down and desist from all work or amusement. Sometimes they were much milder in type, and lasted but half a day or so She first remembers the pains to have commenced six or seven years ago. Has tried many physicians and numerous remedies without cure, and generally has to resort to chloral or morphia for relief. On inquiry, I found that she was near-sighted, and that reading or sewing often brought on her headaches. Had never worn glasses or had her eyes examined. Suspecting, from my experience with Miss S., that the eyes were at fault, I advised her to consult an oculist, and to have the proper spectacles adjusted. She left, promising to do so, and returned in four weeks, having seen not an ophthalmologist, but, from economical motives and the advice of friends, an optician, who had, she stated, after trying her eyes, given her a pair of glasses, which she wore. Not being expert in the matter I could not tell what kind of glasses they were; but from her description of her feelings there was no doubt that they were the proper ones for her condition. She said since she had worn them that "her eyes and head *felt at rest*," and that none of her neuralgia or pains of any kind had occurred. She has continued wearing the spectacles now for two years, during which time I have seen her at intervals, and she is entirely relieved.

DISCUSSION.

Dr. Prout: Miss R. M. D. consulted him October 26, 1879, at the request of Dr. F. W. Rockwell, who wished to know whether there was any ophthalmoscopic evidence of disease of the brain. For more than a year she had had severe pains in temples, back of head, etc., which did not seem to be caused by using her eyes, the external appearance of which was normal—apparently good general condition. With the ophthalmoscope some hypermetropia was found to exist, and there was thought to be a slight degree of retinitis, for which she was treated on general principles by Dr. R. Afterward her eyes were brought fully under atropia and carefully tested. It was found, after the effects of this passed off, that with convex spherical glasses of 36 inches focus ($+\frac{1}{36}$) she could read easily, and they were accordingly prescribed, January 3d, 1879. She told the speaker yesterday that the pains are all gone, her head is as well as she can wish it to be. She uses her eyes freely, the glasses being a great help. At times the eyes feel tired and need a little rest, but no pain in the head follows.

A CASE OF PUERPERAL CONVULSIONS, TREATED WITH JABORANDI.

BY J. H. HUNT, M.D.

Mrs. V., aged twenty-one, primapara; was first seen by me two weeks previous to her confinement, and found to be in a condition of general anasarca, with scanty and albuminous urine, but not feeling that she was sick enough to have the doctor. I immediately put her on treatment calculated to eliminate the fluid and excite better action of the kidneys: jaborandi, apocynum, digitalis, etc.

In the course of the next ten days the œdema disappeared, the urine became more abundant and contained less albumen, though there was still enough to excite attention. When I first saw her the quantity of albumen was so large that the test-tube in which her acidulated urine had been boiled could be inverted without losing any, the whole of the contents having coagulated.

Four days previous to confinement she was seized with diarrhœa, which was actively treated with placebos, and which kept up till after labor began.

Nov. 22d I was called about eight o'clock in the morning and found her commencing labor, the os just beginning to dilate and both bowels and kidneys quite free, labor advancing slowly through the forenoon.

At twelve o'clock I was in and found everything in nice condition, and was shown a chamber partly filled with liquid fæces which had just passed her bowels.

At half-past one I called, and found her just becoming quiet from what had evidently been a very violent convulsion. Chloroform was at once administered, an examination made, and os found dilated to about the size of a half dollar, and the head presenting. Anæsthesia was kept up, and forcible dilatation made by first three fingers and afterwards the whole hand in the vagina, until I was able to put on the forceps and deliver a fine female child. In the mean time she had one more convulsion, when the administration of the anæsthetic had been relaxed for a few moments.

The placenta soon came away, and the uterus contracted firmly, with little hemorrhage, though no ergot was given or other measures taken to favor hæmostasis.

After delivery the administration of chloroform was relaxed and the convulsions returned, and were again controlled without difficulty. The pulse all this time had been full, but not above a hundred beats to the minute.

I immediately sent for fluid extract of jaborandi, of which I administered fifteen minims, per oram, every fifteen or twenty minutes, as I could let up on the chloroform enough to enable her to swallow; and each time that the administration of the anæsthetic was relaxed, the eyes would begin to twitch, and premonitory symptoms of returning convulsions show themselves. At the end of two and a half hours, after she had taken two drachms of the jaborandi, she began to perspire *profusely*, so as to soon saturate her clothing and the bed-clothing in contact with her. This time when the chloroform was relaxed she awoke perfectly lucid (which she had not been before), asked for her child, fondled and nursed it, and said she felt first-rate.

In about an hour the perspiration ceased, and as I feared to allow her to remain all night in her wet clothing, I allowed it to be changed, which was done with as little disturbance to her as possible. I bade my patient good night, and left her, as I supposed, to enjoy a night of repose; but had scarcely reached my home, when I was summoned to return, and found her again having convulsions as hard as ever, which I again controlled with the aid of chloroform, and administered fifteen minims of the fluid extract of jaborandi *hypodermically*, which was repeated every fifteen minutes till I had injected one drachm of the fluid extract, when she again perspired as profusely as before, and again awoke perfectly lucid. This time I was very careful not to again agitate her by changing her clothing, but allowed her to go to sleep in the "wet pack." From

this time she had no return of the convulsions and made a speedy recovery, and has since been perfectly well.

My object in relating this case has been not only to add another swallow to the large flock which has already gathered around the one which Dr. White started on its flight just a year ago in this room, but also to call attention to the peculiar point in my case, that though I had completely reduced the anasarca, and the quantity of urine had become normal, and the bowels at the time of labor and for some hours previous had been in a state of hydragogue catharsis, the convulsions came on, and that with great severity.

The return of the convulsions in this case after the first diaphoresis was in my judgment due to the necessary disturbance and fatigue of having the clothing changed.

PROGRESS IN THE MANAGEMENT OF CONTAGIOUS DISEASES BY THE BROOKLYN BOARD OF HEALTH.

BY J. H. RAYMOND, M.D., SANITARY SUPERINTENDENT.

Until very recently the certificate of any physician was sufficient authority for the re-admission of children who had been suffering from scarlet fever or other contagious disease to the schools of the city, and was also adequate for the return of children from a family or house in which these diseases had existed. The experience of the Health Department demonstrated to its officers that such certificates were given long before the danger of contagion had passed, at the solicitation of parents ambitious that the standing of their children in their classes should not be impaired. In one case, while a child was sick with scarlet fever, her sister, daily exposed to the disease, was permitted to attend school, and before the ink on the certificate which admitted her was thoroughly dry this child was herself attacked with the same disease. Another source of danger is in the fact that the physician attending one family is entirely ignorant of the existence of disease in other families in the same house, and having unrestricted communication with each other. His patient recovers, and he gives a certificate of re-admission, while at the very time scarlet fever is on the floor above, and the children returning on this certificate carry back with them daily the germs of disease, entirely without the physician's knowledge. In one case, where there had been several cases of contagious disease and three deaths, children were re-admitted to school on the following certificate :

"This is to certify that ——— ——— is of a sound and healthy constitution. ——— ———, M.D."

In order to diminish as much as possible the spread of contagious disease, the Sanitary Ordinances were amended by the Board of Health in February, 1879, and having been approved by the Common Council and Mayor, and duly advertised, are now in force. They are as follows:

SECTION 142. That no principal or superintendent of any school, and no parent, master or custodian of any child or minor (having the power and authority to prevent) shall permit any child or minor having scarlet fever, diphtheria, small-pox, or any dangerous infectious or contagious disease, or any child residing in any house in which any such disease exists or has recently existed, to attend any public or private school until the Board of Health shall have given its permission therefor; nor in any manner to be unnecessarily exposed, or to needlessly expose any other person to the taking or to the infection of any contagious disease.

SEC. 150. That no person shall allow to be retained, unburied, the dead body of any human being for a longer time than four days, or, where death has been caused by a contagious disease, for a longer time than twenty-four hours after the death of such person, without a permit from this Board, which permit shall specify the length of time during which such body may be retained unburied, and when death has been caused by a contagious disease the body shall be immediately thereafter disinfected in such manner as may be directed by the Board of Health, and enclosed in a tightly sealed coffin, which shall not thereafter be opened, and the funeral of such person shall be strictly private, and in the removal thereof for burial or otherwise hearses only shall be employed.

SEC. 166. * * * * And all rooms or apartments occupied by any person sick of any contagious disease, shall immediately, upon the death or recovery of such person, be, by the person having charge or custody of such rooms or apartments, thoroughly fumigated by the burning of sulphur, or otherwise, in such manner as may be required by the Board of Health; and all clothing, beds, bedding or infected articles used by or in caring for such sick person, shall be likewise fumigated or disinfected, or, in extreme cases, destroyed, as the Board of Health may direct.

SEC. 184. That any person who omits, neglects or refuses to comply with, or who resists any of the provisions of the foregoing ordinances, or who refuses or neglects to obey any of the rules, orders or sanitary regulations of the Board of Health of the city of Brooklyn, shall be guilty of a misdemeanor, and liable to arrest, suit and prosecution therefor; and, upon conviction of such offense, shall be punished by impris-

onment in the county jail not to exceed thirty days, and by fine not exceeding two hundred dollars, nor less than ten dollars, or by both such fine and imprisonment.

These amended ordinances require that a permit shall be obtained from the Health Department. The following is the form of the permit:

BILL OF HEALTH.

Issued by Authority of the Board of Health.

BROOKLYN,.....1879.

Permission is hereby given to.....
residing at.....
to attend school.

For the Board of Health,

.....M.D.,
Sanitary Inspector.

Since this has been in force nearly 1,000 children have returned to schools on these permits. It will also be noticed that rooms or apartments occupied by any person sick of any contagious disease must be fumigated with sulphur after recovery or death, and that this duty devolves upon the person having charge of such rooms or apartments, and not upon the Board of Health. This department has, however, since this ordinance was passed, fumigated 300 premises at the request of citizens, furnishing the material when the people were unable to pay for it. The method recommended is as follows:

For the purpose of fumigation, the windows and doors of the room and the fire-place should be tightly closed. Everything that was in the room during the sickness should be left in it. If the carpet was not removed when the sickness commenced, it should be taken up and raised as far as possible from the floor on chairs, or in any other manner; one board of the floor should be taken up.

An iron kettle should then be raised from the floor on bricks, and five pounds of sulphur placed therein, or one pound of sulphur for each thousand cubic feet to be fumigated; upon this two ounces of alcohol are to be poured and set on fire. Every one must withdraw from the room immediately, as the fumes are poisonous.

The precautions taken with the carpet and the removal of the board from the floor allow the fumes of the burning sulphur to pass beneath the floor and between the walls, and to destroy any germs of disease which may be there. At the expiration of ten hours, not before, the room may be opened. All the windows, doors and the fire-place should remain open for twenty-four hours, that everything may be well aired.

Section 123 of the Sanitary Ordinances is as follows:

That every physician shall report to the Sanitary Bureau, in writing, every person having a contagious disease (and the state of his or her disease, and his or her place of dwelling and name, if known) which such physician has prescribed for or attended for the first time since having a contagious disease, during any part of the preceding twenty-four hours; but not more than two reports shall be required in one week concerning the same person; but every attending or practicing physician thereat must, at his peril, see that such report is or has been made by some attending physician.

Section 5 says that the phrase "contagious disease" shall be held to include all persons sick, affected or attacked by a disease of an infectious, contagious or pestilential nature (more especially, however, referring to the cholera, yellow fever, small-pox, diphtheria, ship or typhus, typhoid, spotted, relapsing and scarlet fevers), and also including any new disease of an infectious, contagious or pestilential nature; and also any other disease publicly declared by this Board dangerous to the public health.

The following is the form of report furnished to physicians, on which these returns are made:

TO PHYSICIANS:

Please make IMMEDIATE report of each case.

ALL blanks in report must be filled.

Give both FIRST and LAST name.

All children in the house named in this report are excluded from school attendance; therefore be sure the NUMBER OF THE HOUSE IS CORRECTLY GIVEN.

Physicians will greatly aid the work of this office by attention to these details.

REPORT OF CONTAGIOUS DISEASE.

Brooklyn,.....*187*

To THE BOARD OF HEALTH, Brooklyn:

Name of Patient.....; Age.....

Residence.....; Ward.....

Disease.....

No. of Families in House....; On what Floor.....

Condition of Premises.....

.....M. D.

Residence,.....

Every twenty-four hours a report is sent to eighty schools in the city, including all the public schools, and many of the parochial and private ones, of all the cases reported that day. These are written with Edison's electric pen, and printed on one of his presses; to do it with pen and ink would require so many clerks as to make it impossible. Through the kind co-operation of Col. James McLeer, postmaster, these notices, received by him at four o'clock in the afternoon, are delivered by the carriers on their half-past four o'clock trip. In this manner the princi-

pals are notified of any contagious sickness before the school assembles in the morning, and can send any children home who come from the infected house. When a house is no longer infected, the premises having been fumigated, the principals are notified of that fact also. The following is the form of the school list:

DEPARTMENT OF HEALTH.

Office of the Board of Health.

The following list of persons sick with scarlet fever or diphtheria, reported to this office within the last twenty-four hours, is forwarded in accordance with the orders of the Board of Health. By an ordinance of the Common Council it is made a misdemeanor for any person to allow any child living in a house where a contagious disease exists, or has recently existed, to attend any school without a permit from the Board of Health.

The fourth column contains a list of houses heretofore reported infected, now considered free from infection. Children from these houses, however, require a permit before being admitted to school. The list is sent to the schools daily, except Fridays and holidays. If not received regularly and promptly, please notify this office.

Brooklyn, ...

NAME OF PATIENT.	Families in House.	RESIDENCE.	HOUSES NO LONGER INFECTED.

It sometimes happens that children desire to return to school as soon as the house is fumigated; but a period of seven days from the last exposure, in cases of scarlet fever, must elapse, lest the child re-admitted might at the very time be incubating the disease. In brief, as long as there is danger of carrying the disease to school, so long is the child excluded.

The city is divided into seven sanitary districts, each district having its inspector. Every case of contagious disease reported is visited by him. At his visit he ascertains the names of all the children living in the house and the schools which they attend. These names are at once sent on postal cards to the school; thus the principals have a double notice—one by the school list and a second one by the postal card. This is made necessary by the fact that many of the children whose addresses are on the school roll-book move to another house, and roll-book not corrected, so that a child might be daily in attendance from an infected house, and it be unknown at the school. Could the special notification by postal card be sent at once, the daily school list would be

unnecessary; but the force of inspectors is not adequate to the work, and two days may elapse before they are able to visit the house. Besides, there are many small schools not on the daily list, and these, therefore, receive only the postal cards. The following is the form of the card:

OFFICE OF THE BOARD OF HEALTH,
Brooklyn.....*1879*.

You are hereby notified that there is contagious disease at.....
.....
The following children living in said house are reported as attending your school:
.....
.....
.....
.....
.....
No pupil must be allowed to attend school from said house without the certificate of this Board authorizing such attendance.

By order of the Board, ...
San. Insp.

The inspector notifies the families in the house of the existence of contagious disease in the house, and leaves a circular which calls attention to the prevalence of scarlet fever and diphtheria, the danger from the same, and gives general hygienic instructions as to the necessity for fresh air, isolation, cleanliness, disinfection, and the precautions as to cleansing and fumigation when the case is ended. He examines the plumbing work of the house and the privy, and if anything needs attention he orders the necessary work to be done. In January, February and March of this year 963 houses were examined where contagious diseases existed, and defective plumbing was found in 289. Many of these defects were of the most glaring kind; sewer pipes without traps, allowing of perfect communication between the public sewers and sleeping rooms, traps that were useless, their water being siphoned out by their own use, putty joints and holes in pipes large enough to admit the arm; these, together with damp and water-sodden cellars and full privy vaults, are the rule where contagious disease exists. Nor are these plumbing defects relics of by-gone days; the same class of work is now being put in houses in this city, and an attempt by the Board of Health to prevent it by an act of the Legislature is declared by certain interested parties to be "unnecessary and inexpedient"—we must wait until they are invaded by disease before their defects can be remedied.

It is often asked if measles and whooping-cough should be reported. No one will deny that these are contagious diseases and are therefore included in the ordinance requiring their report to the Health Office. During the year 1878 there were 67 deaths from measles, and 195 deaths

from whooping-cough. During the first quarter of 1878 there were eleven deaths from measles, and for the same period in 1879 but 4 deaths; in the first quarter of 1878, 21 deaths from whooping-cough, and in 1879 60 deaths during the same period. Measles seems to be on the decrease, while whooping-cough is greatly on the increase. Children suffering from whooping-cough should be excluded from school, but it would not be warrantable, in view of our present knowledge of this disease, to exclude the others either in the family or house; measles should, however, be treated as scarlatina and diphtheria are. The greatest care should be exercised when children are supposed to be well after an attack of whooping-cough, lest by their too early return to school they may communicate the disease.

BROOKLYN ANATOMICAL AND SURGICAL CLUB.

Stated Meeting, March 17th, 1879.

The President, Dr. L. S. Pilcher, in the chair.

GLANDULAR TUMOR OF THE NECK.

Dr. F. W. Rockwell presented a tumor about the size of a hen's egg, which he had recently removed from the neck of a female aged 32 years.

It had the appearance of an enlarged lymphatic gland, one portion of which had degenerated into a cyst, while in other parts there were calcareous deposits. Efforts to cause its absorption had been made during the year previous to its removal, including a long course of treatment with the crystallized chloride of calcium in twenty-five-grain doses, three times daily; but it had continued to steadily increase in size. In the removal of the growth, it was found to lie upon the deep cervical fascia, just anterior to the sheath of the great vessels of the neck and above the anterior belly of the omo-hyoid muscle. Two ligatures were applied, one to a large tributary of the external jugular vein, the other to a small artery.

Dr. Rockwell remarked that the interest attaching to this growth was a pathological one, viz.: as to whether we have here a lymphatic gland, the subject of calcareous and cystic degeneration, or whether, as Paget asserts may be possible, "there are lymphatic gland growths which are usually regarded as enlarged glands, but which are really new growths of the nature of tumors, even in the most limited sense of the term; or whether we have one of the curious varieties of cartilaginous growths which haunt this particular region of the body, and which are, according

to the same authority, composed of fibro-cartilage variously mixed with other tissues, and especially with what appears to be an imperfect or perverted gland tissue. Whichever of these forms they may have, they are commonly embedded in the gland." These we know are prone to cystic and calcareous changes, and from the hard feeling and solitary position of this particular specimen, Dr. R. suspected it to be one of this class.

The specimen was referred to a committee for microscopical examination and future report.

SEQUEL TO EXCISION OF OS CALCIS—AMPUTATION.

Dr. G. R. Fowler exhibited a foot which he had amputated. The patient was the same upon whom Dr. F. had excised the os calcis several months ago for central necrosis of that bone. The large cavity left by the removal of the bone had been filled in very completely with fibrous tissue, but the foot was quite useless, and several sinuses still remained open. At the patient's urgent request the foot was amputated; the long anterior flap method of Bell, of Edinburgh, was adopted, the elastic cord of Esmarch being used as a tourniquet; the vessels were secured with carbolized catgut ligatures, the surfaces washed well with a five per cent. solution of carbolic acid, a drainage tube introduced, and apposition of the flaps secured by animal sutures; the stump was then dressed with antiseptic marine lint covered by a single layer of mackintosh; the subsequent dressings were carried on under the carbolized spray, and although a considerable portion of the flap sloughed, no septic odor was at any time detected; union took place partly by first intention and partly by granulation, and the patient made a speedy and complete recovery.

EARLY DEGENERATION OF CEREBRAL ARTERIES—CEREBRAL HEMORRHAGE.

Dr. G. W. Baker presented the arterial trunks constituting the "Circle of Willis," obtained from the following case: An apparently healthy and well-nourished boy, 15 years of age, while sitting quietly was suddenly seized with giddiness and vomiting, fell from his chair, and soon became unconscious. When seen by the doctor, seven hours after the seizure, he was having clonic spasms of entire body, at about one minute's interval; the right pupil was much dilated, the left normal; axillary temperature 98° F.; pulse, 48; death occurred one hour after, eight hours from seizure. At the *post-mortem* examination the brain alone was examined: the sinuses of the dura mater and the cerebral veins were intensely congested; the convex surfaces of the hemispheres displayed flattened convolutions; the brain substance was exsanguinated; the left lateral ventricle was distended by limpid serum; the right ventricle was occupied by a large blood-clot, which had converted

it into a large cavity, by the breaking down and disorganization of the brain tissue composing its walls, to some depth; this was especially marked in the corpus striatum, in the vessels of which the hemorrhage had probably originated.

The large arteries at the base of the brain, now presented, show numerous patches of atheromatous degeneration within their walls.

Dr. Pilcher called attention to the interest attaching to the youth of the subject of this attack; cerebral hemorrhage was a disease of advanced age; indeed, it had been demonstrated statistically that *the tendency to apoplexy doubles with each additional ten years of life.* Charcot and Bouchard had demonstrated that in cases of cerebral hemorrhage the only constant lesion present was minute aneurisms of the cerebral capillaries; these aneurisms were frequently found in brains the larger arteries of which were not atheromatous. The degenerative changes which precede these capillary dilatations had been described by Robin as consisting in the production of fatty granules or drops in the substance of the walls of the tubes, so as to gradually replace their continuous, homogeneous, transparent and tenacious substance, by an assemblage of little fatty and simply contiguous corpuscles, which offer so much the less resistance as they are accumulated in greater number. This change commences in the finest capillaries, and gradually extends to the larger tubes, and especially to the arteries, advancing from the internal towards the external face of the walls.

This alteration in apoplectics is of the same order as that observed in the capillaries of all old men, and even of many adults; but it constitutes a more advanced phase, becoming sooner or later, according to the individual, the cause of the rupture of the vessels.

In a large proportion of cases this degeneration is excited and accelerated by renal disease, both alone and associated with cardiac hypertrophy. In such cases Dr. P. believed the production of the degenerations in the cerebral vessels to be by a more complex process than by simple weakening from over-distension. He argued that the degenerative changes in these vessels were due primarily to *mal-nutrition,* the result of the vitiation of the blood consequent upon renal disease. The walls of the vessels, thus weakened, become liable to over-distension from the increased force with which the blood is propelled by the hypertrophied and irritated heart. The progressive weakening of the walls of the vessels, their constant over-distension, the little support afforded to them by the soft tissue in which they lie, combine to render their rupture at some point only a question of time. These pathological considerations sufficiently explain the rarity of spontaneous hemorrhage in early life, and their appreciation makes this case of particular interest. There had been

nothing in the previous history of this youth to indicate either cardiac or renal disease; the degeneration in the walls of his cerebral vessels was probably primary in character.

The part of the brain in which the rupture had taken place was the one most frequently the seat of such hemorrhages. Andral, out of 386 cases recorded by him, had found the corpus striatum and the thalamus opticus alone, and in connection with the cerebral hemispheres, to be involved in 298 instances, while the hemispheres alone were involved in only 44 instances.

ANENCEPHALIC MONSTER.

Dr. Geo. Wieber presented a specimen of an anencephalic monster, for which he was indebted to Dr. T. Frickenstein, of Brooklyn, E. D. It had been born prematurely at the eighth month of gestation; the entire cranial vault and the posterior arches of the vertebræ had failed to be developed, and there was no appearance of brain or spinal cord to be seen. A delicate sac filled with fluid had occupied the place of these organs at birth, which was ruptured in the delivery.

The specimen was referred to the Demonstrator for dissection and future report.

GEO. R. FOWLER, M.D., *Secretary.*

BROOKLYN PATHOLOGICAL SOCIETY.

Regular Meeting, March 13th, 1879.

The President, Dr. F. W. Rockwell, in the chair.

TUMOR OF PANCREAS.

Dr. Hesse presented the pancreas and a portion of the duodenum from the following case:

A man, 38 years old, with a history of previous good health. Was first seen on Sunday, March 2d, 1879. He had arisen in the morning feeling quite well; took a light breakfast, and had a normal evacuation of the bowels. During the forenoon he had an attack of pain in the region of the stomach, for which he took about 40 drops of ether. After taking the ether he vomited twice and felt easier. When seen in the afternoon there was no pain or tenderness. The pulse was frequent.

He was ordered an enema and tr. opii should the pain return. It did return later in the day, and the enema and tr. opii were taken, with no benefit. Another physician who was called in prescribed morphia. On the following day the pain continued, and he commenced to vomit. The enema was repeated, and some pills of aloes given. This was followed by a fæcal evacuation. The next day, the vomiting continuing, morphia and bismuth were given internally, and mustard was applied to the epigastrium. The same afternoon, when I again saw him, the pulse was rapid (150) and weak; temp., 104°; skin cold and moist; voice clear, with a tendency to talk. There was no pain or tenderness, but the abdomen was tympanitic, and he vomited frequently a yellowish-red substance, with a disagreeable smell (not fæcal). This did not appear to contain blood. He was given a hypodermic injection of morphia, iced champagne, and an enema containing quinine and opium. He died the same evening.

Autopsy.—The abdominal cavity contained a cupful of light blood-colored fluid. *Intestines* hyperæmic and distended with gas. The *omentum* was very fat. The *stomach* contained a small quantity of fluid resembling blood; its mucous membrane was swollen. Behind the stomach was a mass involving the *duodenum* and *pancreas*, and extending as far as the spleen. The *spleen* was small and surrounded by fat. The *kidneys* were hyperæmic. The *liver* was fatty. The *peritoneum* over the intestines was injected, but on the parietes it showed no sign of increased vascularity. The diagnosis had been peritonitis, following, probably, upon perforation of the duodenum; but the autopsy was made under difficulties and the duodenum was torn in its removal, so that its condition could not be certainly ascertained. (The specimen was referred to the Microscopical Committee.)

TRICHINOSIS—EMBOLISM OF PULMONARY ARTERY.

Dr. Segur presented microscopical specimens of trichina spiralis from one of the members of a family who had been infected. The case was attended by Dr. Maddren. One of the *lungs* from the same subject was also presented, showing *embolism of the pulmonary artery*, the cause of death.

The Curator would be pleased to receive correspondence in regard to the exchange of microscopical slides. Address, Dr. E. S. Bunker, No. 280 Henry St., Brooklyn.

☞ The Secretary requests members presenting specimens to present therewith a written account of the history and pathological appearance.

BENJ. F. WESTBROOK, *Secretary*.

Ἀσκληπιὸς ὁ Σωτὴρ

Χαρμα μέγ' ανθρωποισι, κακων θελκτῆρ' οδυναων.

Hymns of Homer, No. XVI.

PROLIFERATIONS.

——Two-edged Poultices.—On page 53 of our April number we quoted Dr. Brunton's poultice method. A correspondent tried it, and succeeded admirably. A fine crop of blisters over the abdomen healed favorably under his skillful treatment. Judiciously applied, he regards the Brunton poultice as a vesicant of the first water. The rapidity with which the entire abdominal parietes can be removed by this process commends it in infantile colic and tympanites, and for all purposes where paracentesis or aspiration would be indicated. In perityphlitis, intussusception, and strangulated hernia, it surpasses the endoscope and electric light in speedily furnishing a bird's-eye view of the affected parts. In meningitis, bunions and pneumonia it is only partially available as a diagnostic agent, as the heat is insufficient to dissolve the cartilaginous and bony environment.

——Whooping Cough.—Dr. Leeman, of Berlin, presents a new treatment for pertussis. He covers the bed of the patient every night with a blanket that has been sprinkled with a five per cent. solution of carbolic acid. His cases were entirely cured within fifteen days. No toxic effects of the acid were observed. The theory of Leeman is that the disease is produced by a vegetable parasite in the air-passages. Although carbolic acid has been formerly used without satisfactory results, because the methods of application have been less thorough than that proposed by him. . . . . Dr. Uffelmann insists that pertussis demands as much and as thorough attention as typhoid fever. He especially favors isolation to prevent the spread of the disease. If his views were followed out, no child with pertussis would be taken into a non-infected district; every case of the disease must be reported to the health authorities; children with the disease must be kept from school.—*Lancet and Clinic, Jan. 11.*

——Medicine in Contempt.—Judge Davis, of Maine, is quoted as saying, "If there is any kind of testimony that is not only of no use, but even worse than that, it is, in my opinion, that of medical experts." Medical testimony, it is true, is too often contradictory, and so manifestly partisan and pretentious as to make the judiciary grieve, as shown by the above quotation; but those who frame our laws, commonly men guiltless of the most rudimentary acquaintance with medical jurisprudence, must share the blame and responsibility for the existing chaos . . . . and further, when we reflect that a dissatisfied patient, in league with a pettifogging lawyer or a hypercritical consultant, may precipitate a lawsuit upon any member of our profession, regardless of his skill or worth or position, our reflections on the status of medicine in the courts are not likely to be very comforting. The laws themselves are at times ridiculous, if not contemptible.

——Therapeutics of Iron.—There are two different states found in women where iron is either totally contra-indicated or to be given with great caution. The first is a condition of amenorrhœa in florid, plethoric persons. The other is the opposite condition of menorrhagia in certain females. There are cases of menorrhagia associated with pallor and debility, where the usual compound of iron and extract of ergot is not so useful as a non-chalybeate treatment. In these cases it is not any imperfection in the process of blood manufacture which is to be remedied, for the blood is made rapidly and quickly, only to be lost at each menstrual period. It is here desirable rather to limit the rapidity of the blood formation, so that when the vascular turgescence of the menstrual period comes, it will not find the blood-vessels too distended with blood. This will lead to diminished catamenial loss, and so the blood-waste will be economized. According to the experience of Dr. Brown-Sequard and Dr. Hughlings Jackson, iron does not suit epileptics. It increases the tendency to fits. It may improve the general condition, but it aggravates the epilepsy.—*Medical Press.*

——Barff's Process of rendering the surface of iron non-rusting consists in subjecting the article to superheated steam. It produces a dull, black surface, that takes a high polish. Moist air or water in contact will not rust it. It is said to be cheaper than galvanizing and much more durable. Its domestic and sanitary application, as to water-pipes, drainage appliances, cooking utensils, will be various.—*Popular Science Monthly.*

——An "Accident," resulting in death, from a carelessly written prescription, took place in Rossla, Germany. The prescription was written as follows: "Chloral hydrate, 15.0; tinct. opii spl., 15; aq. dest.,

60.0. D. S. A third part to be used as a clyster in the evening." The assistant into whose hands the order came, and who happened to be unqualified, without consulting his principal or the physician interpreted "tinct. opii spl., 15" to mean 15 grammes of tincture of opium, and dispensed it accordingly, the consequence being the death of the patient. The result of a legal inquiry was that the physician, apothecary and assistant were all held culpable, and sentenced to one, two, and three months' imprisonment, respectively.—*Pharm. Journal.*

——The Swill Milk Traffic, in this and adjoining counties, has lately received a very black eye. Not directly or intentionally, perhaps, but because the Governor of the State had moved against pleuro-pneumonia—and it so happens that the principal habitats of that disease are or were the distillery stables. The meat trade with England was threatened by the continuance of that disease, and as a consequence the milk question comes into prominence again. A more wholesome kind of milk is, for a time at least, destined to be supplied to the human infant of these cities. The traffic seemed securely intrenched until this disturbance of trade put the distillery stables under epizootic quarantine.

——The N. Y. Board of Health has just issued its Report for the years 1874–5—long looked-for, come at last. It comes in a blue paper dress, like the Massachusetts series, and like the last Report of the Board of Brooklyn, it contains a biennial statement. It contains 800 pages, printed with great care and clearness, fully indexed and well illustrated. It has articles by Drs. Stephen Smith and Elisha Harris, veterans now on the retired list as respects official life, along with papers by Drs. Delafield, Curtis, Russell, Emerson and others.

——The Latest Novelty comes to us from Germany. Prof. Huerter, of Greifswald, has made a variation of the telephone, called by him the "dermatophone," by the use of which the capillary circulation of the skin is heard.—*Centralb. fur Med. Wiss.*, Dec., 1878.

——Trichinosis.—Dr. Rohde, of Berlin, has used extract of ergot in the treatment of trichina, with marked improvement of the general symptoms, by killing, as he believes, the parasite. He first used the remedy in a case which was attended by epistaxis, and checked thereby the bleeding, not only, but ameliorated the general condition.

——A Vindication.—How many who have heard the line of Pope—"Who shall decide when doctors disagree?"—quoted as showing the peculiar frequency of physicians' disagreements, have stopped to think if the line was in fact intended for the faculty. We have seen it accepted, time and again, in the writings and addresses of physicians, and often in ordinary conversation. But no; the poet uses the word "doctors" twice in twenty

lines in the "Epistle on the Use of Riches," and it is perfectly clear that he is not at all thinking of physicians, but of one or other of the other learned professions—which one it is may be left for the clerics and lawyers to decide between themselves. It is, therefore, simple justice to repel and disown the application of this adage to our fraternity. There are frequent differences among us, it is true, but they are not so pre-eminently common as to warrant the assumption of a garment not intended for us, and that fits others better than ourselves. . . There is an old saying, earlier than Pope, that may have given him the thought expressed by his line, which says, "When the doctors disagree what shall the disciples do?" The word doctor here means the teacher, and, presumably, of theology; at all events, it is impossible to apply it to the medical man.

——Infectious Disease in London is provided for in three special hospitals, having about 2,000 beds. Of this number, 1,570 are for poor persons, while there are only 390 beds for the non-pauper class.—*San. Record,* March 7th.

——Croup and Diphtheria.—A report to the Royal Medical and Chirurgical Society states that croup and diphtheria appear at times to be conveyed by the same influence. Croup may be contracted by contact with a diphtheritic patient, and conversely, diphtheria may be taken from a croupous subject. Albuminuria is more frequently observed in pharyngeal diphtheria. Diphtheria may be an accompaniment to measles, scarlatina or typhoid, independently of any known exposure to diphtheritic infection.

——British Medical Journal.—This ever-welcome exchange opens the year in the new offices of the Association, 161 Strand, London. The number for Jan. 4th appears in a new dress, on white paper and with clean-cut type, and last, not least, the pages are cut. Its earnest editor, Mr. Hart, has opened a new department, called "Our Confessional," for the purpose of recording the mistakes, failures, blunders and warnings of medical practice. The contributions are to be anonymous.

——Two Views of Life.—When the purely intellectual looks out on the odd world in which he has been placed, he is inclined to smile at it, as an amusing comedy. The sympathetic man, on the other hand, the man of feeling, looks upon the world as the scene of a vast tragedy.

——An Antidote in Carbolic Acid Poisoning is dilute sulphuric acid, which combines with the phenol, and forms the non-poisonous phenyl-sulphuric acid. Dr. Senftleben has used it with success. He gave ten drops, diluted, every hour.

——Recent Legislation.—The last Congress gave to the country a National Health Board, which might have been much worse. It gave

$20,000 to print two volumes of the index-catalogue of the National Medical Library, a work of imperishable value. By the order of that Congress, also, the next census, in 1880, will collect the statistics of disease as well as of death.

——A Definition unfavorable to medical theorists: "When a man begins to generalize, he begins to tell general lies."

——St. Luke is the title of a new English monthly. It is said to be religious, with medico-legal tendencies; also somewhat given to science.

——Otitis.—Dr. J. C. Shaw reports three cases of middle-ear disease, causing meningitis, in which he was able to trace the pus along the fifth nerve and casserian ganglion.—*Jl. of Nervous Diseases*, Jan.

——Prophylaxis of Scarlet Fever.—There are physicians in this town who claim that they never have a second case in the same family. The well members are all fed on sulphur, and they all escape. Isolation of the sick is also practiced.

——The Metric System.—The *Popular Science Monthly*, April, contains the departmental reports respecting the propriety of introducing the decimal system into the army, navy, post-office, etc. Some of the difficulties that oppose its immedite adoption are well stated therein.

——The Medical Register of New York, New Jersey and Connecticut. 1879–80. Published under the supervision of the New York Medico-Historical Society. The Register will be sent post free on receipt of price. Dr. William T. White, editor, 130 East Thirtieth Street, New York (Station F.) Price, if paid before June 1st, $2. Price after June 1st, $2.50.

——A New Sound or Indicator.—The new catalogue of Codman and Shurtleff describes an ingenious instrument, called Jennison's exploring and indicating Sound. It is made of steel springs bound together in such a manner that when the point at one end is carried in one direction, the other extremity moves inversely. It is encased in fine rubber. It is likely to prove useful as a repositor as well as a means of diagnosis.

——Dangers of the Uterine Sound.—Dr. C. Liebman, of Trieste, had the misfortune to perforate the uterine walls of two patients, while making examination with Simpson's Sound. The evil consequences were transient and trifling, but Dr. L. has resolved to abandon the introduction of the sound. From one hundred experiments on the cadaver, he found that in about 20 per cent. the sound could be made to perforate the fundus with very slight pressure; while in some the uterus was sufficiently resisting to cause the bending of a Sims' sound forced against the fundus.—*St. Louis Courier of Med.*, April.

——Dentition.—Prof. Thompson, of New York, teaches that the reflex irritation produced by teething is capable of suspending almost entirely the secretion of the gastric juice, and accounts for the sour emesis and stools of undigested caseine, having the odor of fermentation.

——Universal Pestilence Predicted.—The conjunction at perihelion of the four great planets—Jupiter, Uranus, Saturn and Neptune—occurs in 1880, for the first time since the opening of the Christian era. It is predicted that this event will be attended by dire and dreadful disturbances of the atmosphere of this planet. Extreme vicissitudes of weather, deluges followed by droughts, causing the failure of crops, famine and pestilence. The vitality of every living thing of the surface of the earth will be tested to the utmost. The theory is that from 1880 to 1885 there is to be a general and prolonged period of pestilence and woe.

——An Old Adage, quoted by Prof. Post as a caption to his paper on the surgical uses of the actual cautery, reads, *"Quod medicamenta non sanant sanat ferrum; quod ferrum non sanat, sanat ignis."* Dr. Post's paper, read before the State Society in February, and published in the *Med. Record*, affords a valuable survey of the present status of the cautery in surgery.

——Pellefierine, the recently discovered alkaloid of pomegranate bark, is said to be the tænicide principle of that bark. It is a volatile liquid, sp. gr. 0.99, soluble in water, alcohol and ether, giving, with bichromate of potass. and sulphuric acid, an intense green color.—*Magazine of Pharmacy.*

——The Cough Mixture of Sir W. Gull, of London, said to be efficacious in whooping-cough, is composed of equal parts of cod-liver oil, honey and lemon juice. Dose, a teaspoonful or two, according to age, three times a day.—*Monthly Magazine of Pharmacy*, March.

——Erysipelas may act as a curative of chronic conditions of disease. M. Hardy, of Paris, in *L'Union Mèd.*, has repeatedly seen erysipelas supervene in patients suffering from ulcers, and bring about a recovery from the primary disease. Individuals affected with syphilitic ulcerations, broken down by poverty and cachexia, and resisting all specific treatment, after an attack of erysipelas often begin to mend, and recover in a few days; and other forms of skin disease, as the scrofulides, show a tendency to repair as a sequence to erysipelas.—*Canadian Journal of Med. Science*, April.

——The Brooklyn Sea-Side Home for children will open on June 16th, 1879, under the auspices of the Children's Aid Society. Owing to extension of railroad facilities at Coney Island, the Home will be located

this year in the building formerly known as the "Buckingham Hotel," at the end of the horse-car route, and behind the "Aquarium." The location is excellent, and the building, when remodeled, will accommodate a larger number of children than the Society has before been able to provide for. Blank applications will be sent, before the season opens, to the members of the Kings Co. Med. Soc., which will enable physicians to assist those children who need *most* sea air and change of scene. The Aid Society desires to do the largest possible amount of good, and wishes the assistance of physicians toward that end. If at any time any misunderstanding should arise as to any case sent to the Island, Mr. R. D. Douglass, General Superintendent of the Aid Society, should be promptly notified. Mr. R. D. Douglass will act as Superintendent of the Home, and Dr. Walker as Resident Physician for the season.

——Sayre's Jacket.—A Spanish grandee, having spinal curvature, applied to Dr. Don F. Pinto, who put him up in plaster of Paris, and received a fee of $10,850.

——The Plague.—From the *Lancet*, March 29th, we learn that Vetlianka, the scene of the recent epidemic of plague, has a population of 1,442 persons, well housed, with good soil and climate, their hygienic surroundings excellent. Two hundred and seventy-one persons are reported to have suffered from the disease; of these eighty-one recovered, and have undergone examination by the foreign medical commissioners. Of these eighty-one, about one-third give unmistakable evidences of having had the plague. On March 21st a new case was reported.

——Pure Air.—It is a very complicated problem to so build a house that it shall, at all times, contain pure, healthful air. Such a house is possible; but it is very seldom found among the well-to-do or wealthy classes.—"*The House and Its Surroundings.*"

——Tooth-ache.—A pleasant remedy is the compound tincture of benzoin. Dr. Osborn, of Greensboro, Ala., had occasion to apply it several times, in default of something better, and to his agreeable surprise in every instance the patient declared that the relief of pain was immediate.—*N. Y. Med. Brief*, March.

——Secondary Hemorrhage after tracheotomy is the subject of the leading article in the *Annales des Maladies de l'Oreille*, March, in which Dr. Fidele, of Turin, recounts two fatal cases, in which he operated for the relief of croup. One died on the second day, the other on the sixth after operation.

——Hot Water as a Hæmostatic in operative surgery is commended in *The Practitioner*, February, by a London surgeon, Charles B. Keetley, on the ground that it is more effective than cold water, and far more congenial to the system. He suggests that the former is especially applicable in operations upon the abdominal organs.

——The Syrup of Chloral of M. Carles, of Bordeaux, according to the *Bulletin* of the Académie de Médecine, March 16th, is composed as follows:

Hydrate de chloral pur..... 4 grammes.
Eau bouillante.....20 "
Carbonate de soude, en dissolution concentrée... 9 s.
Sirop simple incolore à 35 degrés.....96 grammes.
Essence de menthe Anglaise..... .....une goutte.
Chloroforme pur..... "

(Report of M. Poggiole, setting forth the dangers of the unofficinal preparations of chloral.)

——Dr. C. H. Giberson died, April 19th, at his late residence, 98 Remsen Street. He was born September 5th, 1838, in the parish of Kent, N. B. His early education was obtained at St. John and Fredericton, N. B.; his medical training at the College of Physicians and Surgeons, N. Y., and the University of Vermont, and graduated from the latter in 1861. After serving at the Charity Hospital, he entered the U. S. Navy, October, 1861; he had an eventful service of seven years under Farragut and Godon; he resigned in order to enter private practice in Brooklyn, November, 1868. His private career, of a little over ten years, has been unprecedentedly successful, and of late he had been overstrained by the demands upon his time. He had been connected with nearly all the scientific Societies of the city, and with several of the medical institutions, as the L. I. College Hospital, St. Mary's Hospital and the City Hospital. The cause of his fatal illness was peritonitis, superinduced, as is believed by not a few, by some infection received in the performance of his professional duties.

——Dr. Joseph Howard died at Hartford, Conn., April 14th, at the age of seventy-two years. He was a graduate of Amherst College, and the College of Physicians and Surgeons, N. Y., about forty-eight years ago. He had been a member of the Medical Society of this county since 1835. His remains rest in Greenwood.

——Dr. James H. Hamilton died April 7th, at his late residence, 253 Lewis Avenue, in the thirty-seventh year of his age, after a rapid attack of pneumonia. He had for several years been engaged in teaching, latterly at the Polytechnic Institute.

——Dr. Joseph M. Homiston died April 8th, in his fiftieth year, at 96 Sands Street. He was a native of Massachusetts, a graduate of Yale College, and a member of the County Society. Dr. Homiston had been in waning health for nearly two years, and eventually succumbed from convulsions consequent upon general paresis.

——The Regular Monthly Meetings of the Medical Society of the County of Kings are held at 8 P. M. on the third Tuesday of each month, at Everett Hall, 398 Fulton Street.

The May meeting will be held on the 20th, at which there will be presented the following papers:

Trichinosis, by Dr. Wm. Maddren.

Nephrotomy, by Dr. L. S. Pilcher.

——New Members.—At the April meeting the following new members were elected: J. E. Wade, M.D., Univ. City N. Y., 1871; J. R. Taber, M.D., Coll. Phys. and Surg., N. Y., 1874; H. F. W. Rich, M. D., Bellevue H. M. Coll., 1879; H. W. Nevin, M.D., Bellevue H. M. Coll., 1878. The following were proposed for membership: Drs. F. B. Gillette, 128 Calyer Street, E. D.; J. F. Valentine, 452 Leonard Street, E. D.; J. H. Hillyer, 185 Prospect Place; W. E. Conroy, 586 Franklin Avenue; W. B. Chase, 812 DeKalb Avenue; J. Kene, 118 Willoughby Street; W. S. Smith, 1047 Third Avenue, and J. T. Burdick, 459 Gates Avenue.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

OFFICERS AND COMMITTEES FOR 1879.

President.....J. S. Prout, M.D., 167 Clinton St.
Vice-President.....C. Jewett, M.D., 310 Gates Ave.
Secretary.....R. M. Wyckoff, M.D., 532 Clinton Ave.
Assistant Secretary.....J. H. Hunt, M.D., 419 Hart St.
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G. W. Baker, M. D.,48 Bedford Ave., E. D. B. A. Segur, M.D., 281 Henry St.
A. Hutchins, M.D., 796 De Kalb Ave. L. S. Pilcher, M.D., 4 Monroe St.

DELEGATES TO THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

(1878 to 1882.)

Drs. J. C. Shaw,	Drs. A. J. C. Skene,	Drs. E. N. Chapman,
J. D. Rushmore,	G. G. Hopkins,	J. S. Prout,
R. M. Wyckoff,	A. Mathewson,	F. W. Rockwell.

Chap. XI, Art. 2, of By-laws: "Any Member elected as Delegate to the Medical Society of the State of New York, who shall be unable to act as Delegate during two successive years, shall be considered to have vacated his position as Delegate."

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION.

Drs. Andrews,	Drs. French,	Drs. Pilcher,
Bodkin,	Garrigues,	Schapps,
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PROCEEDINGS

OF THE

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

STATED MEETING, MAY 20, 1879.

SURGICAL OPERATIONS UPON THE KIDNEYS.

L. S. PILCHER, M.D.

Certain affections of the kidneys, as tubercular and cancerous degeneration, impaction of calculi within its cavity, suppurative inflammation of its substance or of its ducts—however caused—when free escape of the pus by the ureter is prevented, and hydronephrosis, are recognized as incurable, and tending to death, unless relief can be afforded surgically.

The object of this paper is to review the operations which have been attempted on the kidneys, and to deduce from them some practical conclusions for future guidance.

Three methods of surgical interference in cases of nephritic disease have been practiced:

1. When an abscess originating in the kidney shall have been formed, and shall be distinctly recognizable as pointing in the lumbar region, an incision has been made into it and the contents evacuated. Under the term of nephrotomy this was the only operative interference countenanced by surgical authorities, until within a few years.

Many cases are recorded in surgical literature of renal calculi being discharged either spontaneously or with the assistance of the surgeon through abscesses and sinuses opening in the lumbar region.

In this class may be included also certain cases in which, after a nephritic abscess has discharged through the loin and a sinus has remained, at the bottom of which a calculus has been detected, more or less extensive incisions are made for its removal. Cases of this character were recorded by *Lafitte, a century ago.

*"Sur les Cas où la Néphrotomie se fait avec succès." Lafitte, Memoires de l'Academie Royale de Chirurgie. 1753, Vol. II, p. 233.

Case 1.—Recently, in 1869, *Annandale, of Edinburgh, has published a case in which, having detected with a probe a hard substance at the bottom of a fistula in the left loin, he enlarged the track with a bistoury, and extracted with dressing forceps an elongated, irregular-shaped calculus, weighing 72 grains. Rapid recovery resulted.

A strict limitation of the use of the term nephrotomy to cases in which the kidney itself is incised would exclude this class of cases from its application.

2. When satisfactory evidence of the presence of a calculus in the cavity of the kidney has been secured, and the symptoms occasioned by it have become grave in their character; or when from any cause an accumulation of pus has taken place in the kidney which has not free vent through the ureter, methodical incisions have been practiced through the tissues of the loin, the kidney has been exposed, and its cavity laid open to secure the evacuation of its contents.

Until within a few years such a procedure has been commonly condemned as rash and indefensible,† and two cases recorded as having been subjected successfully to such operations discredited.

Case 2.—The most ancient case is that of a certain French archer, "the free archer of Bagnolet." An account of his case is given by Mezeray in his History of France. The date of its occurrence is uncertain, but it was previous to the time of Paré (1510–85). The story goes that this archer was under sentence of death for crime; but at the request of the Faculty of Paris was delivered up to them for experiment, as it was known that he had nephritic trouble. The kidney was cut down upon (so the account goes), and a stone extracted. The patient recovered and lived many years after in good health.‡

Case 3.—The second case occurred during the last century. A certain Mr. Hobson, English Consul at Venice, having insisted that Dominicus de Marchetti, a famous physician of Padua, should do something to relieve him of his sufferings, that physician cut down as far as the kidney one day, and the next finished by cutting into the kidney and extracting two or three calculi. The patient recovered and lived for years after with a urinary fistula, but with permanent relief from his pain.§

April 27th, 1869, Mr. Thomas Smith ‖ read a paper before the Royal

* Annandale. Edinburgh Medical Journal, 1869, XV, 21—29.

† Vide article by W. W. Dawson, Nephrotomy, N. Y. Med. Journal, 1873, XVIII, 35—51, for quotations from many authors on this point.

‡ Dict. des Sciences Méd. Paris, 1819, XXXV, Art. Nephrotomiè.

§ Bernard, Lond. Philosoph. Trans. XVIII, 333.

‖ Smith, Med. Chirurg. Trans. 1869, LII, 211-223.

Medical and Chirurgical Society, of London, in which he proposed, on theoretical grounds, the operation of reaching the kidney from the loin, and incising it for the removal of calculi within its cavity.

Case 4.—An attempt to carry this procedure into effect was first made in April, 1870, by Dr. M. Gunn,* of Chicago, who at that time cut down upon and exposed the kidney in a male supposed to be suffering from renal calculus. No calculus could be felt when the fingers grasped the kidney; the kidney was not incised nor interfered with; patient recovered well from the operation, and for a period of six weeks was free from pain; previous symptoms then recurred.

Case 5.—In the early part of this same year, 1870, in the case of a woman who presented the ordinary symptoms of renal calculus, Mr. Durham,† at Guy's Hospital, cut down upon and exposed the right kidney, but, being unable to find anything abnormal about it, desisted from further interference. Some relief from pain followed the operation, but it soon recurred. Two years later she was subjected to the operation of extirpation, which case will be cited farther on.

Case 6.—June 27th, 1870, Mr. Bryant,‡ at Guy's Hospital, cut down upon and incised the pelvis of the left kidney in the case of an adult male; several ounces of pus were evacuated. The man died on the twenty-fourth day thereafter of chronic peritonitis, not referable to the operation, which had relieved much his sufferings. Examination showed that the left kidney, the one incised, was the subject of tubercular degeneration; the right was healthy.

Case 7.—May 16th, 1872, Dr. G. A. Peters,§ at St. Luke's Hospital, New York City, operated upon a male, aged 36 years, in whom a confident diagnosis of calculous pyelitis had been made. The affected kidney, the right, was incised and explored, but no calculus was found. The kidney being found to be badly disorganized from tubercular degeneration, was then extirpated. Death resulted sixty-five hours after the operation, from exhaustion. The remaining kidney was found to be healthy.

Case 8.—October 24th, 1872, Dr. W. W. Dawson,‖ of Cincinnati, in the case of a woman, aged 50 years, who had been suffering for eight years, and who had a continually enlarging tumor in the region of the

* N. Y. Med. Journal, 1870. Vol. XII.
† N. Y. Med. Journal, 1872. Vol. XVI.
‡ Lancet, 1870, Aug. 27th, 292.
§ N. Y. Med. Journal, 1872, XVI, 473-485.
‖ N. Y. Med. Journal, 1873, XVIII, 35-51.

left kidney, diagnosticated as a nephritic abscess produced by a calculus, exposed the kidney by incision through the loin, and incised it, liberating some pus and a small calculus. Death resulted on fifth day from pyæmia.

This is the first complete and perfectly authenticated case of proper nephrotomy for the relief of nephro-lithiasis.

Case 9.—June 23d, 1873, Mr. G. W. Callender,* at St. Bartholomew's Hospital, in the case of a woman aged 44 years, who was rapidly sinking from the effect of a large nephritic abscess, incised the loin, exposed and cut into the substance of the dilated kidney, and removed from its cavity a large calculus weighing 1.55 ounces. The patient died on the fourth day from exhaustion, neither benefited nor harmed by the operation.

Case 10.—Early in 1874 Dr. F. D. Lente,† of Cold Spring, N. Y., performed nephrotomy, in which he cut down upon and incised a diseased kidney, which was entirely free from peri-nephritic disease or adhesion. The patient was relieved and recovered. This case was alluded to by him in some remarks made before the New York Pathological Society, May 13th and 27th, 1874. Whether a calculus was present and removed, or not, he does not state. The remaining kidney was affected with Bright's disease at the time of the operation; but the patient, nevertheless, survived two years. ‡

Case 11.—May 12th, 1874, Dr. J. J. Crane,§ at Bellevue Hospital, performed nephrotomy on a male, aged 35 years, for the relief of a nephritic abscess. A sac formed of dilated kidney tissue was exposed by incision through the loin, and opened, liberating a large quantity of pus. Death fifty-two hours after operation. Peritonitis. Other kidney also diseased.

Case 12.—March 24th, 1876, Dr. M. H. Williams,‖ of New York City, in the case of a male, aged 32 years, supposed to be suffering from calculous pyelitis, and in a state of great prostration, having incised the tissues of the loin, opened into a peri-nephritic abscess, which was found to communicate with the cavity of the kidney by three openings. No calculus was found. Patient made a rapid and perfect recovery.

Case 13.—June 15th, 1877, Dr. James E. Barbour,¶ of South Nor-

* St. Bartholomew's Hospital Reports, 1873, IX, 220.
† Medical Record, 1874, 410 and 412.
‡ Private letter from Dr. Lente, February 12th, 1879.
§ Medical Record, 1874, 409 and 412.
‖ Medical Record, 1876, 475.
¶ Proceedings Kings County Medical Society, 1879, 52.

walk, Conn., in the case of a female, aged 35 years, the subject, as was supposed, of nephro-lithiasis, exposed the left kidney by an incision parallel to the lower border of the last rib, and about two inches below it, and explored the kidney by means of a large aspirating needle. No calculus was detected, but a small amount of thick pus was liberated. The puncture having been enlarged, an ordinary elastic rubber catheter was introduced and used as a drainage tube. Patient recovered from the operation, and was relieved of her nephritic symptoms, but died of other disease about one month thereafter.

Case 14.—December 7th, 1877, Mr. Bryant, at Guy's Hospital, in the case of a female, aged 42 years, who presented pus in the urine, with swelling and tenderness in the region of the right kidney, exposed and incised the kidney, liberating 2½ ounces of pus. Death at end of nine days. Remaining kidney was enlarged, white, mottled, and contained many cysts.

The thirteen cases which have now been given under this second class are all which I have been able to find in a careful and extended examination of the literature of the subject. Of these, the two first, those of the French archer and the English consul, are not accompanied with sufficient positiveness of detail to render them of any use other than as accounts of interest to the medical antiquary. The cases of Gunn and Durham fell short of any incision into the kidney; that of Williams, likewise, seems not to have included any incision into the kidney; that of Peters, culminating in extirpation, is thus removed from the class under consideration; seven cases remain—cases of nephrotomy proper—those of Bryant, Dawson, Callender, Lente, Crane, Barbour and Bryant. Of these, two recovered and five died. Of the deaths, two—in the cases of Dawson and Crane—are directly referable to the operation; the first from pyæmia on the fifth day, and the second from peritonitis at the end of fifty-two hours. The three remaining deaths were occasioned by conditions which existed previous to the operation, and were not affected by it, although relief from the nephralgia was secured. The two cases of recovery, of Lente and Barbour, were attended with relief from the nephritic symptoms for which the operation was performed.

The records of *accidental nephrotomies* give data of great value in the determination of the possible surgery of the kidneys. The many cases of gunshot, punctured and incised wounds of the kidneys on record are now to be examined. In the Medical and Surgical History of the War of the Rebellion, Surgical Volume, Part Second, page 169, it is stated that twenty-six instances of alleged recovery from gunshot wounds of the

kidney, during the war, were recorded, though the reports of them were generally wanting in such details as would establish them as unequivocal. In six of these the liver also was wounded. I quote one unequivocal case, No. 510 of the History:

Case 15.—The left kidney was wounded; there was considerable hemorrhage and excessive prostration; notwithstanding total neglect for six days, followed by removal some hundreds of miles to an hospital, and then typhoid fever after three months, complicated with a renal abscess which discharged externally, producing a temporary urinary fistula, ultimate recovery and restoration to perfect health resulted.

Twenty-one additional instances of recovery from gunshot wounds of the kidney are referred to in the same volume, collated from various sources, in two of which pieces of cloth, carried into the kidney by the entering bullet, were afterwards discharged by the urethra.

Fourteen cases of recovery after incised or punctured wounds of the kidney are collated in the notes on pp. 162, 163 and 171 of the same volume. I quote three:

Case 16.—M. F., in January, 1868, fell backward upon a scythe and sustained a cut 4½ inches long, through which the right kidney, slightly wounded, protruded. The bloody effusion was removed and the kidney returned, and ice applied; bloody urine passed during eight days. The patient recovered completely.

Case 17.—W. M., aged 14, fell from a height of forty feet, and received a wound of the soft parts immediately above the right iliac crest, through which protruded the lower end of the right kidney; a piece of its substance had been chipped out, leaving a gap which would admit the finger-end; tenderness of abdomen, discharge of small quantities of blood-stained urine by the urethra, and free discharge of urine from wound. Recovery in three weeks.

Case 18.—J. K., aged 30, wounded in two places by the extended blades of a pair of tailor shears, the one entering the abdomen about two inches above the anterior superior spinous process of the ilium on the left side, and from which about four inches of the omentum were protruding; the other just beneath the last rib on the same side and near the spine. Copious discharge of urine from the latter for two days. Protruding omentum removed. Recovery in fourteen days.

Large numbers of fatal cases, in which wounds of the kidneys have been sustained, are recorded; the fatal results in which, however, are clearly due to complications existing—kidney wounds being rarely uncomplicated by wounds of other important organs.

The following case shows the repair which may take place in cases of extensive kidney lesions, while death has resulted from other causes:

Case 19.—At the battle of Inkermann, War of the Crimea, 1855, a Russian soldier sustained two gunshot wounds—one in the loin and one in the left knee; from the latter he died. Post mortem, the kidney was found to have been penetrated near its centre, antero-posteriorly; the organ was much contracted, and presented at its centre, upon both faces, a depressed fibrous and solid cicatrix, to which were joined, as the rays of a star, five other irregular cicatrices.*

Death from other causes has permitted the demonstration of the existence of extensive injuries of the kidneys, with but slight and temporary symptoms being produced.

Case 20.—A Hindoo, aged 25 years, fell from a height of thirty-five or forty feet, and sustained a compound dislocation of the right wrist-joint, and a fracture of the lower portion of the left radius. For two days he passed bloody urine, and complained of pain in the hypogastrium, which then subsided. He died on the sixteenth day after the accident from tetanus, referred to the joint-injury, the bones involved in which had necrosed.

Autopsy revealed ruptures of the liver and spleen, and in addition an extensive rupture of the left kidney, running from its upper end to the hilum; the areolar tissue surrounding the vessels at their entrance into the hilum was densely infiltrated with blood; some coagulated blood lay over the kidney and upon the left side of the pelvis; no peritonitis.†

We pass now to the consideration of the third class of operations upon the kidneys—extirpation. To the late Prof. Gustave Simon, of Heidelberg, is due the honor of first having demonstrated the possibility of this operation, and of having methodically and successfully performed it. His first case‡ (case 21), a woman, Margaretha Kleb, operated upon August 2d, 1869, for the relief of an abdominal urinary fistula, recovered, and was living in good health seven years after.

Case 22.—His second case, § a woman 30 years of age, operated upon for the relief of nephro-lithiasis, after a period of twenty-three days of rapid convalescence, developed a peritonitis after imprudently eating under-ripe fruit, which, becoming complicated with pleuritis, proved fatal on the eighth day from its onset. At the autopsy the large cavity caused by the extirpation of the kidney was found to have become entirely filled in, and there was no pus detected in the neighborhood of the wound. The remaining kidney was much enlarged and in perfectly healthy condition.

* Legouest, Chirurgie d'Armée, 2d ed., p. 403.

† Fayrer, Clin. and Patholog. Observ. in India, p. 591.

‡ Simon, Chirurgie der Nieren, I Theil.

§ Simon, Chirurgie der Nieren, II Theil., pp. 148-163.

Case 23.—March 23d, 1871, Prof. von Bruns, in the case of an officer who had received a gunshot wound of the left kidney in the previous December, through which wound irregular-shaped calculi had begun to escape, enlarged the original wound and exposed the kidney, which was found expanded into a kind of cyst. A portion of the twelfth rib having been excised to make room, the kidney was extirpated. The loss of blood was slight, but the operation lasted two hours, having been prolonged by reason of dangerous chloroform narcosis.

Death ten hours after operation, believed to be due to the diseased condition of the other kidney, which had many small abscesses in its substance. No peritonitis. The report of this case was made by Dr. Linser.*

Case 24.—In May, 1872, Mr. Durham, at Guy's Hospital, in a woman 43 years of age, suffering for years from intense pain in region of right kidney, with the ordinary symptoms of renal calculus, having been subjected to lumbar section, but without incision into the kidney, two years before (see case 5), cut down upon and removed the kidney. Upon examination no disease could be detected in it. Death within a week. No cause for death discovered by autopsy. The remaining kidney, the ureters and bladder healthy.†

May 16th, 1872, at St. Luke's Hospital, New York City, Dr. G. A. Peters extirpated a tuberculous kidney, the operation resulting fatally. This case has already been cited. (See case 7.)

Case 25.—June 7th, 1877, Mr. Jessop, at the Leeds Infirmary, England, removed the left kidney from a child 2 years and 3 months of age. The kidney was the seat of a tumor, encephaloid in appearance; the whole mass weighed sixteen ounces. The ureter and renal vessels were tied with whipcord, which served as a drain for the wound. During the first ten days after the operation, at which time the case was reported, no unfavorable symptoms had developed. Farther history unknown.‡

These six cases are all which I have been able to find recorded in which extirpation of a kidney has been deliberately planned and executed, unless the following case should be thus classed:

Case 26.—December 2d, 1873, Dr. A. Campbell, of Dundee, Scotland, in the case of a female, aged 49 years, suffering from an abdominal tumor, made the usual incisions as for ovariotomy. The ovaries were found to be healthy and the tumor to be a cyst springing from the lower end of the left kidney. The kidney was removed with the cyst;

* Simon, Chirurgie der Nieren, II Theil., p. 52.

† N. Y. Med. Journal, 1872, Vol. XVI, p. 484.

‡ Lancet, 1877, June 16th, p. 889.

the ureter and renal vessels were tied with hempen thread; four omental vessels were tied with carbolized cat-gut; the interior of the abdomen was cleansed and the wound closed. For six weeks the patient was in a critical condition; she then rapidly improved, and finally made a complete recovery.*

Certain other cases, also, are recorded in which, after abdominal section for the removal of tumors not supposed to involve the kidneys, a kidney has been removed:

Case 27.—In April, 1868, Peaslee mistook a solid renal tumor for an ovarian tumor, and removed it. Death from peritonitis fifty hours after operation. Secretion of remaining kidney copious till death. No coma.†

Case 28.—In a letter to the *Medical Times and Gazette*, volume for 1870, Spencer Wells states that he once removed a healthy kidney which was inseparably adherent to an ovarian cyst; though the patient died on the third day, no trouble from non-elimination of the urine was experienced.

Case 29.—In the Archivs für Gynækologie, 1870, p. 146, a case is reported by Spiegelberg, in which an hydatid cyst of the right kidney was mistaken for an ovarian cyst and removed. Death.

Case 30.—In the same journal and year, p. 415, Schnettelig reports a large renal cyst mistaken for ovarian, removed. Death on second day. Real nature of tumor discovered post mortem.

Case 31.—Lastly, in July, 1871, Dr. Meadows, of London, Eng., operated for ovariotomy, but found a huge cyst of the kidney; this he removed, securing the vessels by a ligature. Death on the sixth day from hemorrhage. No trace of inflammation present.

Certain cases yet remain in which complete extirpation of a kidney has been done.

Cases 32 and 33.—Twice, once in December, 1870, by Dr. J. T. Gilmore, of Mobile, Ala., and again in December, 1876, by von Langenbeck, of Berlin, has a tumor in the lumbar region, after extirpation, been found to consist of an atrophied kidney. Rapid recovery from the operation followed in both instances.

Two cases of stab wounds, with hernial protrusion of a kidney through the wound, and its subsequent extirpation, are recorded:

Case 34.—June 3d, 1873, Stephen Palko, aged 25 years, was stabbed with a knife in the left hypochondrium; two or three hours after a cough set in, which caused the kidney to protrude through the wound. At end of twenty-four hours he presented himself at the clinic of Prof.

* Edinburgh Medical Journal, 1874, XX, p. 36.

† Peaslee, Ovarian Tumors, etc., p. 158.

Brandt, in Klausenburg, having a pulse of 80, a temperature nearly normal, and being able to walk to a gallery to be photographed. On the fourth day after being wounded the kidney was drawn out and severed, after its pedicle had been ligated. Rapid recovery resulted. At no time did he show symptoms of uræmia or peritonitis. The quantity of urine secreted increased daily while he was under observation. June 23d he left the hospital, able to work as before.*

CASE 35.—In January, 1875, an Arab girl, of about 15 years, was stabbed with a knife in the loin; the right kidney was wounded, and was forced out of the abdomen between the lips of the wound, by which it was partially strangulated; a ligature was thrown around the pedicle formed by the vessels and ureter, and gradually tightened; at the end of six weeks the very slight pedicle still remaining was cut through and the organ removed. The girl made a rapid recovery, and remained thereafter in perfect health.†

CONCLUSIONS.

Reflection upon the facts which appear in this somewhat extended *résumé* of the results of past experience in the surgery of the kidneys, convinces me that they are sufficient upon which to base definite principles for future guidance. In connection with these should be considered the anatomical relation of the organs, and the results of experiments upon lower animals. Without at present discussing these, or going further into details, I submit the following propositions as abundantly proven:

1. Incisions into the substance of a kidney are not in themselves especially dangerous.

2. The kidneys may recover from very considerable lesions, if complications can be averted.

3. Anatomically, the exposure or the removal of a kidney is not especially difficult nor dangerous.

4. A single healthy kidney is capable of eliminating sufficient urine for the maintenance of health.

These four propositions being accepted, two conclusions logically follow. These I submit with a confident belief that they will in time become generally accepted as rules of surgical practice:

I. *Incisions into the substance of the kidneys for the exit of retained fluids, or solid concretions, or foreign bodies which have entered from without, or for purposes of exploration, are justifiable.*

II. *When a reasonable certainty exists that one kidney is healthy and the other is the seat of advanced and irremediable disease, its extirpation is justifiable.*

* Wiener Med. Wochenschrift, 1873.

† Marvand, Recueil de Mém. de Med., de Chirurg., etc., 1875, XXXI, 502.

BROOKLYN PATHOLOGICAL SOCIETY.

Regular Meeting, April 24th, 1879.

The President, Dr. F. W. Rockwell, in the chair.

PNEUMONIA OF UPPER LOBES—AMYLOID LIVER.

Dr. Stephenson, of St. Peter's Hospital, presented specimens from the following case:

An adult man entered the hospital, in the service of Dr. W. H. Martin, April 3d, 1879. There was no previous history, except that he had been living alone, and had been poorly cared for. Five days previously he began to cough, and had pain in the right side. On admission he was very feeble; pulse, 90; temp., 101½°, going up to 104° in the evening. The upper lobe of the right lung presented the signs of pneumonic consolidation, with a peculiar depression of the intercostal spaces on inspiration. The *abdomen* was distended, particularly in the right hypochondriac region, where it was painful and tender. The liver appeared to be enlarged. He was jaundiced. The urine was acid, sp. gr. 1015, and it contained a small amount of albumen and bile. The stools were clay-colored. The sputum was reddish, tinged, also, with the color of bile. The superficial veins, particularly on the abdominal wall, were dilated. On the 5th his heart began to fail, and he continued in an exhausted condition till the 14th, when erysipelas appeared on the nose, extending to either cheek. This gradually abated, his strength fluctuating from day to day till the 20th, when he had distressing tympanitis, with dyspnœa and cyanosis. He died that evening.

Autopsy.—Right lung. The two upper lobes consolidated, the lower compressed by the liver. The *left lung* bound down by old adhesions. The *pericardium* contained 36 oz. (weight) of sanguinolent effusion. Its surfaces were covered by a rough layer of lymph. The *liver* weighed 7½ lbs., and extended half way down to the crest of the ileum. The *spleen* was enlarged, weighing 13 oz. The kidneys weighed 6 oz. each.

Examination of the lung showed the consolidation to be tough and of a somewhat fibrous consistence. Pus could be pressed out of the capillary bronchi. It was also somewhat œdematous. The liver, on section, presented the characteristic appearance of amyloid degeneration. The application of the solution of iodine also gave the characteristic reaction.

TUMOR OF BREAST.

Dr. Stuart presented, for Dr. A. S. Clarke, a tumor of the breast. The patient, a widow, 46 years old, had been healthy till the past seven months, during which time, after missing one period, she had menstruated every three weeks. Her family history is good. Her maternal grandmother had enlarged cervical glands, probably strumous. During the past two years the patient has used a sewing machine, which she worked with her right hand. Last August she first experienced pain in the right breast and subscapular region, chiefly the latter. On examining her breast at that time she found a hard lump the size of a pigeon's egg. It gradually increased in size till its removal. There has been little pain in the breast, but considerable in the back. No glandular enlargement. The skin was becoming adherent at one portion of the tumor, and in spots it presented a drawn and glazed appearance. The overlying veins were prominent in size and color. It was removed by Dr. Skene on the 16th of April, assisted by Dr. Clarke and others.

Dr. Walker inquired as to the value of the antiseptic spray in operations upon the breast.

Dr. Rockwell: The breast is not a good situation for determining its value, as the tissues in this locality usually heal very rapidly. Referred to cases illustrative.

Dr. Stuart: In St. Bartholomew's Hospital Reports for 1878, cases of traumatism of the knee, where the joint had been opened under the spray with a very satisfactory result, are narrated.

PATHOLOGY OF THE ENCEPHALON.

Dr. Shaw presented a specimen showing the development of a membrane between the dura and pia arachnoid. Its edge was attached to the dura near the superior longitudinal sinus, and the remainder was spread out between the membranes.

Dr. Shaw also presented specimens illustrating hemorrhage into the corpus striatum, with descending degeneration of the crux and anterior column of the cord.

Regular Meeting, May 8th.

The Vice-President, Dr. A. Mathewson, in the chair.

The Microscopical Committee reported that the tumor of the breast presented by Dr. A. S. Clarke, at the last meeting, showed no histological evidences of malignancy. Its structure resembled somewhat granulation tissue.

CHRONIC NEPHRITIS.

Dr. Thayer gave the history of a lady 40 years old, married seven years, the mother of one child, five years old, who had been the subject of chronic nephritis two or three years. She had always been delicate, and particularly so since nursing her husband through an enteric fever, four years ago. In the spring of 1877 she had repeated fainting turns, nausea, and irregularity of the catamenia. These symptoms were somewhat relieved by local treatment. In September, 1877, she became pale and debilitated, had nausea. She lost her appetite, had headache and faintness. She also became anasarcous.

The urine was examined by Dr. Segur, Dr. Elmendorf and himself. They found, once or twice, a little albumen and a few hyaline casts. She recovered from this attack, but in January, 1878, she had a recurrence of the symptoms in a more aggravated form. This attack was also recovered from, but in the fall of 1878 the symptoms were again present. The symptoms disappeared by December, to return again in the latter part of January, 1879.

In the spring of 1878 she was seen in consultation by Dr. Armor. She was then jaundiced, had pain and tenderness in the epigastrium, and severe vomiting. Dr. A. suspected some disease of the stomach and liver. In all the attacks the urine contained, in addition to what was mentioned above, an excess of urates. The specific gravity was never below 1015. In the first three attacks there was no mental disturbance. In the last there was delirium, followed by coma, with rapidly increasing anasarca, and almost complete suppression of urine. After the external application of digitalis, about three quarts per diem were drawn off with a catheter. It again diminished in quantity before death. In the attacks the skin was dry.

In reply to Dr. Segur, the doctor stated that there had been no previous dyspepsia ; that she was very anæmic at first, and that for the year preceding the appearance of the anasarca she had suffered from nausea.

In reply to Dr. McCorkle, it was stated that in the spring of 1877 there was no excess of coloring matter in the urine ; that digitalis was given internally at one time, but owing to its making her head uncomfortable it had been abandoned ; that she had had twenty-five drops of the tincture three times a day, for three days, with no perceptible effect. After the digitalis was applied to the skin the urine excreted was darker than normal, but its specific gravity was not tested, and that during the last attack the albumen and casts exceeded in quantity and number what had been previously observed.

In reply to Dr. Stuart, it was said that at no time was there any

œdema of the lungs, or functional disturbance of the heart (irregularity); that the normal relation between respiration and circulation was not disturbed; that there was no drowsiness or disturbance of vision, except a vertiginous affection upon making exertion, and that no ophthalmoscopic observation had been made.

Dr. Segur then exhibited the kidneys, which had been examined by him. He regarded them as the most important specimens that had ever been presented to the Society. Their length was about 5 inches, weight, 5¾ ounces each. They were red in color. The capsules were firmly adherent. The cortical substance was slightly increased, both outside of and between the pyramids. The surface was smooth. They were specimens of interstitial nephritis. They had not been examined microscopically. When they were first brought to the doctor he was engaged in the study of hyaline casts as they appeared in the urine of persons in apparent health. Hyaline casts were often scarce. He had, on one occasion, searched four hours before finding one. This was the first case in which he knew of hyaline casts having been studied from the book of nature. The impression prevailed that the presence of albumen in the urine was necessary to the diagnosis of Bright's disease. He wished to correct that impression.

Dr. Merritt: It is the teaching of authors that casts are frequently present in non-albuminous urine, and that they should always be looked for when symptoms indicative of renal disease are present. He referred particularly to Dr. Roberts.

Dr. Jewett: Would not the quantitative determination of the urea be of value in the diagnosis?

Dr. McCorkle had been struck by the quantity of urea present all the way through the history of this case. Dr. Murchison refers to the formation of the nitrogenous ingredients of the urine in the liver. The jaundice, pain and tenderness in the epigastrium and hypochondriac regions, vomiting, etc., would indicate that disturbance in the liver was undoubtedly one of the causes of the decease of this patient.

Dr. Read referred to the number of undetected cases of Bright's disease, and to its association with disease of the other viscera. No doubt it is often the manifestation of a constitutional disorder which affects the other organs as well.

Dr. Westbrook thought it of interest to determine the cause of death in cases of this kind. In this case the kidneys were not sufficiently diseased to account for the symptoms. Under the influence of the digitalis they had excreted three quarts of urine daily for three days. The brain and its membranes had not been examined. The liver was said to have

undergone fatty degeneration. He thought the cause of death was to be sought for as much in the other organs as in the kidneys.

The heart was reported normal.

The Curator would be pleased to receive correspondence in regard to the exchange of microscopical slides. Address, Dr. E. S. Bunker, No. 280 Henry St., Brooklyn.

☞ *The Secretary requests members presenting specimens to present therewith a written account of the history and pathological appearances.*

BENJ. F. WESTBROOK, *Secretary.*

BROOKLYN ANATOMICAL AND SURGICAL CLUB.

Stated Meeting, April 21st, 1879.

SUBCUTANEOUS SECTION OF THE INTERNAL CONDYLE OF THE FEMUR FOR THE RELIEF OF GENU-VALGUM, AFTER THE METHOD OF OGSTON, WITH A REPORT OF TWO CASES. BY GEO. R. FOWLER, M.D.

Congenital deformities of the knee-joint are very rare. The patella is occasionally found to be dislocated either to the inner or outer side of the leg at birth, but other than this, no departure from the normal shape of the limb at the knee-joint seems to occur congenitally.

Genu-valgum is one of the most common deformities met with. It is seldom acquired during middle life or old age, but generally occurs during the period extending from infancy to adolescence.

The stages of development of this deformity are believed to be as follows:

1st. Disproportionately powerful contraction of the biceps flexor cruris muscle.

2d. Relaxation of the internal lateral and posterior crucial ligaments.

3d. An arrest of growth of the external and increased growth of the internal condyle of the femur.

4th. Oblique outward rotation of the tibia.

When the deformity occurs during infancy, it is generally during the period of most difficult dentition, after the child is a year old, and when abnormal states of general nutrition more commonly obtain.

The cases which occur later in life are met with most frequently in the persons of those who are apprenticed at an early age to some trade requiring constant standing. Of these, the greater number will be found among bakers and cabinet-makers; and indeed, so common is this deformity in Germany among the first-named, that it is there known as "baker's leg." Among bakers it occurs almost invariably in those whose duty it is to "scale" or weigh the dough after it is rolled out in loaves for baking. These persons stand with their right limb thrown slightly forward, the knee flexed, and the foot somewhat in the position of splay foot. The biceps muscle of the right limb is rigidly contracted, in order to assist the workman in maintaining his equilibrium as he receives the dough from the right-hand side of the scales, weighs it, and then rotates his trunk upon his lower extremities to pass it along to the oven. Any one imitating this position and motion will be at once struck by the rigid condition of the outer hamstring of the right limb, or the one thrown forward, as compared with the relaxed inner hamstring of the same limb.

The effect of this disproportionately powerful contraction of the biceps is to put upon the stretch the internal lateral and posterior crucial ligaments. These slowly yield to the constant traction until they become permanently relaxed, and the articulation, instead of having simply an antero-posterior motion, the only one it possesses in a normal condition, gains lateral movement.

This lateral movement tends to a deviation n the normal shape of the limb when the body is in the erect position. The vertical column which the healthy limb represents has its extremities and fixed points respectively at the ankle and acetabulum, and supports the weight of the trunk in the line of its axis. When relaxation of the internal lateral and posterior crucial ligaments occurs the femur maintains its original and perfect position; but the feet are removed to a greater distance from each other, and the weight of the body is received upon a broken line, the axis of the femur meeting that of the tibia at the knee-joint, and forming the apex of a triangle, the base of which is represented by a line drawn from the centre of the acetabulum to a point midway between the two malleoli. As will be readily seen, this deviation from the normal shape of the limb must necessarily result in an increased pressure upon the external condyle of the femur, and an almost entire relief from pressure of the internal condyle. The external condyle, in this abnormal condition, bearing, as it does, half of the entire weight of the trunk, is arrested in its growth, and the internal condyle becomes lengthened. The limb, when flexed,

maintains its normal position and relations; partially extended, the tibia rotates obliquely outwards, and in full extension the lengthened internal condyle fills up the space which would otherwise exist between it and the head of the tibia, and the normal axis of the limb, as a whole, is destroyed.

In the treatment of this deformity nothing can be gained by waiting for Nature to right the limb. Spontaneous recovery never takes place, and mechanical treatment is frequently of no avail, unless conjoined with division of the tendon of the biceps. As long as there is lateral movement to the knee-joint something may be gained by attempting to restore the normal axis of the limb by mechanical means, together with tenotomy of the external hamstring. But when no lateral movement can be demonstrated to exist, other operative measures become necessary.

The earlier attempts to correct this deformity by operative procedure other than tenotomy consisted of removal of a wedge-shaped piece of the head of the tibia by what was known as Meyer's operation. This has been most emphatically and justly condemned as based upon incorrect and unsound principles. Knock-knee is not dependent in any way upon curvature or other alteration in the size and shape of the tibia.

After the introduction of Lister's methods of antiseptic surgery, operations involving the opening of joints became more frequently resorted to, and attempts to correct genu-valgum by sawing off and removing the elongated internal condyle were made.

This operation (Annandale's), although based upon a knowledge of the anatomy and pathology of the deformity, did not become very popular with surgeons, for the reason that it almost invariably resulted in a complete and incurable bony anchylosis of the knee-joint, and was finally abandoned.

In 1876 Dr. Ogston, of Aberdeen, Scotland, proposed as a means of relief of this deformity an operation consisting of the subcutaneous division and fracture of the internal condyle of the femur, and a forcible straightening of the limb, thereby restoring the normal proportion in the length of the two condyles without removing any part of the articular surface. Subsequently, in *The Edinburgh Medical Journal* for March, 1877, he reported a case so operated upon in May, 1876, under the antiseptic spray of Lister, in which a perfect cure was accomplished. Mr. George W. Callender, of London, as well as other English surgeons, has since repeated the operation of Ogston—without the antiseptic spray, however—with the same excellent results.

This operation, as performed by myself, is as follows: The limb being strongly flexed and rotated outwards, an Adams tenotomy knife is entered about two inches and a half above the tip of the internal condyle

of the femur, and in the middle line of the inner aspect of the thigh; with its edge directed towards the bone, the knife is pushed onwards until its point can be felt to have reached the groove between the condyles. With the knee strongly flexed and the patella drawn outwards (if it be not already dislocated), it is not difficult, through the tightly-drawn anterior coverings of the joint, to feel the exact location of the knife after it has entered the cavity of the joint. A saw such as Mr. Adams uses in performing subcutaneous osteotomy of the femur is passed along the same route, the flat side of the knife acting as a guide. The latter is then withdrawn. The bone is sawn in the direction of the dotted line, Fig. 1, by short strokes directly backwards, and when it is judged to be nearly divided,

FIG. 1.

FIG. 2.

the limb is extended and forcibly straightened, the inner condyle being fractured and forced upwards in a position to bring its articulating surface upon a level with that of the external condyle as shown in Fig. 2. This being accomplished, the limb is retained in position by some fixed dressing. About the fourteenth day passive motion is commenced.

The two following cases, occurring in my own practice, were submitted to this operation with the most gratifying results:

Case 1.—Joseph Redman, aged 19; a baker by occupation; born in Germany; one year in this country. About three years ago, and shortly after being apprenticed to his present trade, he noticed the deformity. It steadily increased, and when he came under my observation it was in the

Fig. 3.

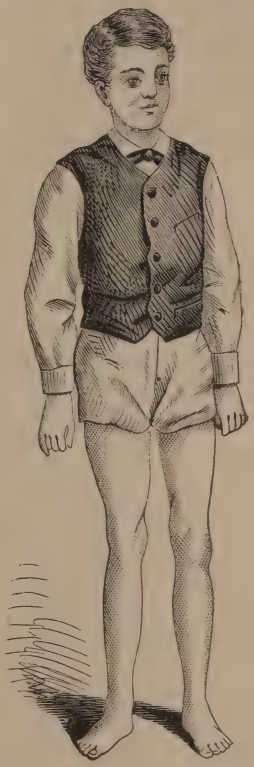

Fig. 4.

condition shown in Fig. 3, from a photograph. On Nov. 26th, 1878, I performed Ogston's operation as above described, under the carbolic spray, in the presence of Drs. Pilcher, Jewett, Hunt, Elmendorf and King. The anæsthetic used was ether. After the operation the wound

was dressed with a single layer of antiseptic marine lint and covered by Mackintosh. The limb was then put up in plaster of Paris, supported by a short thigh splint. No reaction occurred, and the patient remained absolutely free from all pain and discomfort.

On the fourteenth day I removed the dressings for the first time, and found the wound healed perfectly. Passive motion was then commenced, and in less than three weeks after the operation the patient walked about the room. Fig. 4 shows the condition of the limb at this time, and Fig. 5 the amount of flexion he can comfortably make at the end of three months.

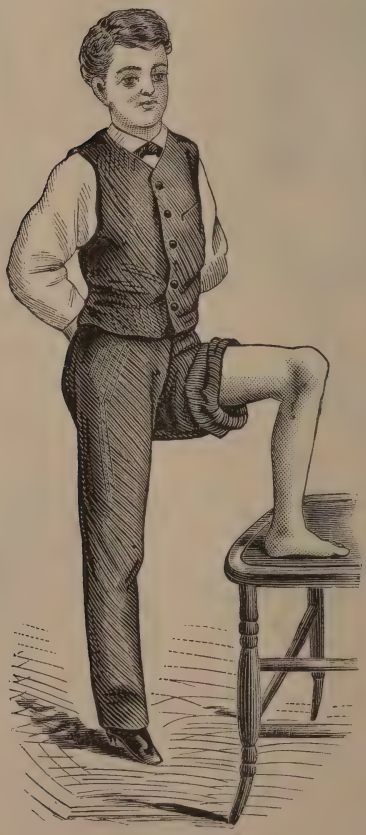

Fig. 5.

CASE 2.—Annie Behrman, aged 2 years and 10 months, of German parents; a healthy child in other respects. At nine months she began to walk, but it was not until six months afterward that the knock-knee was observed. The parents applied to an instrument maker, who made for her a long brace with a joint at the knee and elastic bands. This was worn for four months, and abandoned, no benefit being derived from the treatment. For several months nothing was done for the child. She was then brought to Mr. Leyh, a skillful maker of surgical mechanical appliances in the Eastern District, who sent her to me for operative treatment. Fig. 6, from a photograph, shows her condition at this time. The "out knee" of the other limb and a lateral curvature of the spine are secondary effects of the genu-valgum.

FIG. 6.

FIG. 7.

On April 5th, 1879, I performed Ogston's operation upon this child under the carbolized spray; present, Drs. Pilcher, Figueira, Elmendorf, King and Rogers. I had caused to be made a small Adams saw especially for this case. I sawed the internal condyle completely through. Upon trial it was found that the deformity, although considerably lessened, could not be completely reduced. I then resorted to subcutaneous division of the tendon of the biceps flexor cruris, after which the limb was easily straightened. The wounds were dressed with antiseptic marine lint and carbolized oil-silk, and the limb encased in a paraffine splint. The child was then laid in Prof. F. H. Hamilton's

double splint for fracture of the thigh occurring in children, and the limb operated upon securely bandaged to the apparatus. The other limb was also secured to the splint of that side.

The reaction resulting from so severe an operation upon so young a child was surprisingly slight. The temperature never arose above 100° Fahr., and after the first night no pain was complained of. On the fourteenth day I removed the dressings and found the wounds entirely healed. The limb was perfectly straight, as shown in Fig. 7, and I at once flexed it to a right angle. For the first few days the limb was sup-

Fig. 8.

ported by placing the child in the double splint after each act of passive motion, and cold water dressings applied. Fig. 8 shows the power of flexing the limb now possessed by the child.

These two cases are believed to be the first operated upon by this method in this country.

REMARKS UPON THE OPERATIVE TREATMENT OF GENU-VALGUM. BY LEWIS S. PILCHER, M.D.

Reference has been made by Dr. Fowler to the attempts which have been made by various surgeons to overcome the angle produced by the undue elongation of the internal condyle in cases of genu-valgum.

The first operation in which the knee-joint was freely opened and a wedge-shaped slice of the internal condyle removed, was done by Mr. Annandale, now Clinical Professor of Surgery in the University of Edinburgh.

This was reported in the Edinburgh *Medical Journal* for July, 1875. It was done in a very aggravated case, with the result of making a straight limb, but with considerable and permanent stiffness of the joint. Previously to this Mr. A. had divided the shaft of the femur in four cases, but without satisfactory results. In a private letter to myself, dated November 4th, 1878, Mr. A. states that he does not now advocate this operation, but practices the operation suggested by Ogston, using a chisel, however, to divide the condyle, instead of a saw. He has now operated upon twenty cases in all by different methods, and says that he is satisfied that as far as our present knowledge goes, Ogston's operation, with the modification noted, is the best in cases of aggravated genu-valgum.

The first operation of Dr. Ogston was in the case of a male, 18 years of age, in whom the deformity commenced to develop when he was six years of age, after an attack of typhus fever, and had steadily increased up to the time of the operation. His general health was good, but distinct evidences of early rickets were discernible in other bones of his body. When his feet were placed together one knee crossed completely over the other, so that a hand could be passed through between the transposed knees. The knee the most affected was first operated upon; the reaction was almost *nil;* his temperature never rose above 99.8° F.; the joint never became hot or tender, and at the end of the third week the dressings were discontinued and passive motions commenced. The other leg was operated upon in like manner in a little more than three weeks after the first, with an equally favorable result. Within ten weeks from the first operation he was dismissed, walking perfectly.

In September last, at St. Thomas' Hospital, London, I had the opportunity of seeing this operation done by Mr. MacCormac. It was stated that this was the fifth operation of this kind by this gentleman, and that his previous cases had been completely successful. The patient

in this case was a delicate-looking boy of 8 or 9 years; both knees were operated upon; complete antiseptic precautions were used, a solution of thymol, 1-1000, being the agent used for the spray; the condyles were sawn as directed by Dr. Ogston; the fracture of the thin bridges of bone left unsawn was attended with an audible crack, and the restoration of the tibiæ to their proper line was immediate; the limbs were fixed in gypsum bandages, and were afterwards slung in an apparatus composed of a long, straight splint on the outside of either limb, connected by a foot-piece below. On the sixth day after the operation I again saw the child, and examined him carefully. I found him perfectly comfortable, tongue clean and moist, appetite good, no elevation of temperature; no unpleasant symptom had been manifested since the operation.

The desire to avoid, if possible, opening into the knee-joint, has stimulated other surgeons to attempt to devise other methods for the relief of knock-knee, since the publication by Dr. Ogston of his method.

In July, 1877, Mr. Chiene, Surgeon to the Royal Infirmary of Edinburgh, presented to the Medico-Chirurgical Society of Edinburgh a boy upon whom he had done the following operation for the relief of knock-knee: The tubercle into which the bony tendon of the adductor magnus is inserted having been exposed by a vertical incision upon the inside of the thigh, the periosteum, divided by a crucial incision, was raised, and a wedge-shaped piece of bone cut with chisel and mallet out of the substance of the internal condyle, above the tubercle, care being taken to avoid the epiphyseal line. By properly directed pressure the leg was then brought into its normal axis, where it was confined by splints until full consolidation was accomplished. The operation was performed with full antiseptic precautions; the knee-joint was not opened into; in both legs the wounds healed in a fortnight, and as a result the legs were practically straight.

This case was reported in the Edinburgh *Medical Journal* of September, 1877. At nearly the same time a similar operation, and with equally good result, was done by Dr. McEwen, of Glasgow; this was reported in the *Lancet* of March 30th, 1878.

The operations of Mr. Chiene and Dr. McEwen were devised independently of each other.

In September, 1878, I had an opportunity of examining, at the Royal Infirmary, Edinburgh, two of the cases in which Mr. Chiene had done his operation. The first was a boy ten years of age, in whose case the deformity, affecting chiefly the right knee, had been comparatively slight, though still sufficient to seriously incommode him, and was increasing in its gravity. The operation was performed June 22d, 1878. The patient was discharged from the hospital July 19th following. Sep-

tember 21st, the date when I saw him, the limb was straight and strong, and the motion of the joint was perfect.

The second case was that of a girl, aged 14 years, in whom the deformity began to develop from the time she began to walk, and had gradually increased up to the time of operation. There were marked evidences of a general rachitic taint. The deformity was extreme, affecting both knees. July 20th, 1878, Mr. Chiene operated upon the right limb, the one the least deformed.

After the removal of an unusually large amount of bone, with great difficulty and only by using great force was the leg brought into a straighter position. The limb was then confined between lateral splints, secured by *elastic* bandages, and extension of 8 lbs. applied. Under this treatment a further improvement was secured. At the end of five weeks the lateral splints and the extension were discontinued, and the limb put up in plaster of Paris. September 21st, 1878, when I examined it, the limb was still being supported by the plaster. A great improvement had been effected in its line, although it was not yet perfectly straight. The left leg, the most crooked, was yet to be operated upon.

Mr. Reeves, of the London Hospital, in a clinical lecture on knock-knee and its treatment, published in the *British Medical Journal* for September 21st, 1878, advocates yet another mode of operating, which he calls "Subcutaneous Extra-articular Osteotomy." The following is his description of it:

"A scalpel, previously dipped in carbolized oil, is obliquely introduced just above the most prominent part of the internal tuberosity, and the soft parts and periosteum are divided; by the side of the knife, a chisel, also dipped in carbolized oil, is inserted, and, with a few strokes of the mallet, the condyle is penetrated at its greatest depth, *but only as far as the cartilage covering it.* The chisel, with the greatest depth of the condyle and soft parts—due allowance being made for the thickness of the cartilage—previously marked on it, is first directed towards the inner side of the inter-condylar groove, then partially withdrawn, its direction altered forwards and backwards until the condyle has been *loosened*—not separated. The feeling of resistance to the chisel should not at any time be overcome. This loosening can be ascertained by gently using the chisel as a lever, and placing the fingers on the condyle, which will be found to yield before them. I do not attempt to loosen the entire condyle; it is not necessary, as the limb can be straightened without it, and, by leaving a small portion of it to grow, the probability of a genu-extrorsum, which may be induced by the increased growth of the external condyle, now relieved from excessive pressure, is much diminished. If the operation be accurately executed, there is no risk of entering the joint, of injuring the popliteal artery, or of damaging the epiphyseal cartilage; but if the joint were entered with the chisel it would be of much less consequence than if opened by the other method, as the wound would be a clean incised one and more strictly subcutaneous. It is well to trace out the outline of the condyle before operating, as it is a good guide; but it is not absolutely necessary."

I had an opportunity of seeing Mr. Reeves himself do this operation

at the London Hospital, in September last, upon a girl of 13 or 14 years, a case of genu-varum, dependent primarily upon marked outward rachitic curvature of the femur, but aggravated by secondary changes in the condyles, in consequence of the altered lines of pressure. Both knees were operated upon. Decided improvement in the line of the limbs was effected; but it required the exertion of great force, and not until after a distinct crack indicated that some structure had given way was any improvement manifested.

It is of interest to consider whether the varying conditions which may be present in different cases of genu-valgum may not afford indications of value in determining the choice of a procedure for their rectification.

In early childhood the bones are more pliable; the articular extremities are more largely cartilaginous; in a larger proportion of cases a rachitic taint is determining the deformity, presupposing an abnormal bony softness and pliability; simple ligamentous weakness is more likely to be present; extensive overgrowth of the internal condyle is less likely to have taken place; the lesser degrees of the deformity are more frequently met with.

In older children and youths a bone more dense and firm is to be managed; a longer continuance of the deformity, with permanent changes of structure and form, and its more aggravated degrees, are more frequently met with.

However, severe degrees of the deformity do occur in quite young children, and also the slighter degrees are sometimes developed in advanced adolescence.

In young children, therefore—except when the more severe forms of the deformity have already become established—complete relief would be expected by the use of orthopedic appliances, and the pursuance of a tonic treatment, both local and general, combined in some cases with tenotomy.

When the use of orthopedic appliances has been found insufficient, or when the degree of the deformity, when first presented for treatment, is so aggravated that the uselessness of such apparatus is apparent, then upon the *angle* and the *age* will probably depend the determination of the operation to be adopted. The child being young and the angle not extreme, the operation proposed by Mr. Chiene recommends itself as well adapted to accomplish a cure; a small wedge of bone removed, a pliable bridge of bone left which bends without breaking, the joint uninjured, a good result would be expected.

In older subjects, and in all cases of great angle, the want of pliability of the bone, or the large size of the wedge of bone necessary to be removed, renders the application of Mr. Chiene's method less satisfac-

tory. Fracture of the connecting bridge of bone is probable; which, indeed, Mr. Chiene informed me had occurred in some of his cases. The second case, operated upon by Mr. Chiene, which I have related—that of the girl of 14 years—illustrates the unsatisfactory results of the operation in aggravated cases, involving a severe operation, tedious repair and long-continued weakness of the limb. Only to so complete a master of antiseptic surgery as is Mr. Chiene would have been obtained as good a result as was finally secured.

As to the operation of Mr. Reeves, I am unable to understand how the mass of the internal condyle can be pushed upwards, while the articular surface with its encrusting cartilage is preserved intact, without the removal of any of the bony substance which is heaped up at its base. In the operations which Mr. R. has performed it seems to me that either of two things must have happened, the articular lamella has been fractured and the whole condyle forced up—a condition like to that produced in Ogston's operation—or the lower epiphysis of the femur has been torn off upon the outside, and separated from the shaft sufficiently to admit of the rectification of the limb.

In the class of cases under consideration, viz.: those in youths and adults, and in all cases of great angle with overgrowth of the internal condyle, the operation of Ogston remains as an efficient and safe means of cure, the best at our command. The many cases in which it has already been done have demonstrated that the use of the saw entails no additional dangers which are obviated by a substitution for it of a chisel, and the original procedure of Dr. Ogston still appears to me as superior to any modifications of it that have been suggested. As to its applicability to cases occurring in young children, Mr. Callender, on page 189, Volume XIV, St. Bartholomew's Hospital Reports, gives it as his opinion that the practical difficulty of severing the comparatively soft structure of the condyles without endangering the subjacent vessels is so great, that it should be a bar to its performance in such cases. I accordingly watched with great interest the operation of Dr. Fowler in the case of the little child, Annie Behrmann, not yet three years of age, but failed to discover any practical difficulties which care and judgment on the part of the operator were not competent to meet.

Ἀσκληπιὸς ὁ Σωτὴρ

Χαρμα μέγ' ανθρωποισι, κακων θελκτῆρ' οδυναων.

Hymns of Homer, No. XVI.

PROLIFERATIONS.

——Committee on Permanent Building.—This committee, appointed at the late Annual Meeting of this Society, have, through the kindness of Col. W. W. Stephenson, Member of Assembly from the Fifth District, Kings County, had a Bill passed through the Legislature, a copy of which is herewith appended:

An Act to amend Section thirteen of Article one of Title thirteen, Chapter eighteen, Part one of the Revised Statutes, entitled, "An Act to Incorporate Medical Societies for the purpose of Regulating the Practice of Physic and Surgery in this State."

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section thirteen of Article one, Title thirteen, Chapter eighteen, Part one of the Revised Statutes, is hereby amended as follows:

§ 13. And be it further enacted, that it shall and may be lawful for the Medical Societies of the respective counties of this State, and also the Medical Society of the State of New York, to purchase and hold any estate, real or personal, for the use of said respective Societies, provided such estate, as well real as personal, which the County Societies are hereby respectively authorized to hold, shall not exceed the sum of *twenty-five* thousand dollars, and that the estate, as well real as personal, which the Medical Society of the State of New York is hereby authorized to hold, shall not exceed five thousand dollars.

§ 2. This Act shall take effect immediately.

——Sea-Side Home.—Dr. Walker, who will act as Resident Physician of the Sea-Side Home at Coney Island during the coming summer, desires that the members of the Society shall visit the Home whenever they are so disposed, and states that the Home will be of especial service to children convalescing after surgical operation or severe sickness. The Doctor will endeavor, as far as possible, to carry out any particular plan of treatment desired by physicians, with any cases sent to the Island—provided that the plan is *outlined in writing*—and will always be glad to receive such physicians as consultants.

For the purpose of obtaining reliable information, he respectfully urges the physicians to accurately and fully fill out such blanks as may be sent to them.

——Charles H. Giberson was born September 5th, 1838, in Bath, Carleton County, New Brunswick—the ninth of eleven living children. His ancestors on both sides were noted for great longevity and remarkable physical vigor. His father was a farmer—a man of large, vigorous frame, genial manners and sound judgment. The subject of this notice, according to the statements of those who knew him as a child, was early characterized by honesty, cheerfulness and gentleness of disposition. His early education was obtained in the country school at home, and was continued in the Florence School at Woodstock, N. B., the seminary at Fredericton and the training school at St. Johns. He began teaching at the age of 16 years—a fact which would indicate unusually early mental development and forwardness in his studies. He was a teacher at intervals in his studies after this, and received, on examination by the Board of Education, a first-class license as teacher. He was an eager reader of such books as fell in his way at this time—among others, of some medical works which he found in the library of a friend. And the interest excited by them was what led him to the study of medicine as a profession. About 1857 he began studying dentistry at Fredericton, and subsequently spent some time in Boston, where he received a diploma from some dental college. In 1858 he began the systematic study of medicine with Dr. Hiram Dow, of Fredericton. From thence he went to the University of Vermont, where he graduated in medicine in the spring of 1861. Soon after he came to New York to continue his medical studies, and was appointed as one of the medical staff of Charity Hospital, where he served till he entered the United States Navy, October 19th, 1861—having passed examination for the position of Assistant Surgeon. For two or three years he was in Farragut's squadron on the Mississippi River, serving on the United States Steamer Portsmouth in the action with Forts Jackson and St. Philip in April, 1862, and on the United States Steamer Mississippi in the spring of 1863, at the time of the engagement of Port Hudson, sharing the dangers of his comrades when the ship grounded under fire, and had to be abandoned and blown up.

He continued in the navy seven years, serving in the South and the North Atlantic squadrons and at the Brooklyn Navy Yard, and having been promoted, after examination, to be Passed Assistant Surgeon in 1865.

In November, 1868, he resigned his position in the navy and settled in Brooklyn, where he soon laid the foundation for a very successful practice. In May, 1869, he married Miss Indiana Jackson, daughter of Dr. Samuel Jackson, Surgeon U. S. N., who, with four daughters, survives him.

For a time he served in the out-door department of the Long Island College Hospital, and subsequently, for several years, on the surgical staff of St. Mary's Hospital for Women. In 1876 he was appointed Attending Surgeon to the Brooklyn City Hospital, and held this position until the time of his death.

He also took an active part in the medical societies of the city. He was one of the founders and first President of the Brooklyn Pathological Society—the first meeting for its establishment having been held at his office—was for several years its Secretary, and, by his warm interest, constant attendance and able reports, did perhaps more than any one else to secure for it an active and prosperous existence.

In 1872 he was orator of the Kings County Medical Society at the celebration of its Semi-centennial Anniversary, and his production on that occasion elicited much praise.

He was delegate from the Kings County Medical Society to the New York State Medical Society for four years, and in 1878 was elected permanent member of the latter.

He was a member of the committee on registration for the Kings County Medical Society from the time of its establishment, became its chairman about four years since and devoted much time and care to the work.

In all the positions which he held he worked with an untiring energy and a careful attention to details which was one secret of his success.

He was a contributor to the medical journals and to the scientific proceedings of the medical societies with which he was connected. In the annals of this Society his papers on Croup, Urethrotomy and Extra-Uterine Pregnancy are worthy of especial note.

In 1877 he read a paper before the New York State Medical Society on the "Cold Bath in Scarlatina," and in 1878 one entitled "Surgical Notes," giving an account of a case of nerve-stretching, and his observations on the use of nitrous oxide as an anæsthetic.

His private practice had been for several years extensive and lucrative, and was still rapidly growing. To his patients in critical cases he devoted an amount of care and labor which few can endure, and which, perhaps, shortened his life.

He was busily engaged in his professional work till the evening of April 14th. After a brief illness with idiopathic peritonitis, he died in the early morning of April 19th.

A. MATHEWSON,
B. N. SEGUR,
ALEX. HUTCHINS,
A. L. LOWELL,
} *Committee.*

The following reports of Dr. G.'s last illness and the account of the post-mortem were prepared and submitted by Drs. RAND and WUNDERLICH:

Dr. Giberson's last illness apparently began on Monday, the 14th of April, although he had a severe headache, accompanied with nausea, vomiting and some febrile movement on the Saturday previous, after exposure to wet and cold during Friday night. This attack, however, was relieved by 20 grains of calomel and a saline, and on Sunday and Monday morning he attended to his professional duties.

Towards the evening of the 14th he was seized with a chill, which was quickly followed by headache, nausea and vomiting. That night he took 20 grains of calomel, and a saline six hours afterwards. During Tuesday the most prominent symptoms were headache, nausea and vomiting. The stomach would tolerate nothing but very hot water, which temporarily relieved the nausea. He complained of no pain, except in the head, and there was no tenderness over the abdomen. Pulse 80, temperature 102°; but he attached no importance to the elevation of temperature, as it had always risen in what he called similar attacks, to which he said he had been subject for years. The bowels moved very freely during Tuesday and Tuesday night, and his head felt somewhat relieved.

Wednesday morning Dr. Wunderlich saw him with me. There was no special tenderness except in the right iliac region, and even here, as elsewhere, firm pressure with the palm of the hand gave relief. No rigidity of abdominal muscles, and no distension. Temperature 102¾°, pulse 84, soft and compressible; respiration 20. The most distressing symptoms were referable to the stomach. Nausea continued. There was some pain, which he ascribed to gas in the intestines; for the pain was entirely relieved on expulsion of the gas, until its re-accumulation. Bismuth in small doses was prescribed, and hot fomentations over the abdomen. Morphia was suggested, but the doctor refused it. Bowels moved three times during the day.

In the afternoon he had a severe paroxysm of pain, which he likened to colic. Four minims Magendie's Solution, hypodermically, gave complete relief. Small quantities of milk and lime-water were given, but they were vomited soon after. Champagne and Valentine's Beef-juice were likewise rejected, but an enema of beef-juice was retained.

Dr. Wunderlich saw him with me again at six P. M. Pulse 96, temperature 101°. Profuse perspiration. Condition of abdomen about the same as in the morning. Peritonitis was suspected, but there were no positive symptoms upon which to base a diagnosis. Dr. Wunderlich was with him during Wednesday night. Sufficient morphia was given hypodermically to keep him entirely free from pain, and he slept during the greater part of the time. Considerable quantities of gas were expelled by the mouth and rectum.

Thursday, 6 A. M., pulse 104, temperature 101°; at 10 A. M., pulse 110, temperature 103°, respiration 24. Moderate distension of abdomen; some pain on pressure and on movement of the body. No rigidity of abdominal muscles; urine contained no albumen. Concluded the disease was peritonitis. Morphia was continued as indicated, and enemas of Valentine's Beef-juice with pancreatic emulsion, alternated with milk and brandy, were given every four hours.

Dr. Conkling was called in consultation, and saw him frequently during the remainder of life. He confirmed the diagnosis.

At 4 P. M., pulse 110, temperature 104¾°, respiration irregular. It was agreed to continue the same treatment, and to give 20 grains muriate of quinine with the enema. This produced cinchonism in five hours. Small quantities of clam-juice were given by the mouth, but soon rejected.

At 9 P. M., pulse 120, temperature 104°.

Friday, 1 A. M., pulse 120, temperature 103¾°, respiration very irregular. Gave 10 grains muriate quinine per rectum.

About 2 A. M. traces of a coffee-ground material were for the first time observed in the matter regurgitated from the stomach. This increased in quantity for the next twelve hours. The bladder from this time on had to be evacuated by the catheter. A simple enema was used early Friday morning with a view to empty the bowel, but it was retained until drawn off by a flexible rubber tube.

At 8 A. M., pulse 120, temperature 104½°.

Dr. Armor was called in consultation, and suggested that small quantities of atropia be combined with the morphia as a cardiac stimulant.

Dr. Flint confirmed the diagnosis, but had nothing to suggest in the way of treatment.

During the day the temperature remained high, the pulse increased in frequency and feebleness, and became very irregular. His mind remained clear till evening. Death took place at a quarter past three on Saturday morning.

Post-Mortem Appearance.—Eight hours after death, injection of 5 gallons of solution of chloride of zinc and chloral. Post-mortem 37 hours after death. Head and thorax not opened. Abdomen moderately distended. Considerable fat in abdominal parietes. Parietal peritoneum injected. Intestines moderately distended with gas. The mesentery, a large part of small intestines, the cæcum and part of ascending colon coated with lymph. On the right side some coils of the intestines were glued together by lymph. The lymph in some places was in flakes, in other situations it was of the consistence of thick gruel. The intestinal canal was carefully examined; there was no appearance of ulceration or of perforation. Appendix vermiformis contained dark matter of the consistence of gruel, same as was found in cæcum and ileum. There were no concretions, and no appearance of ulceration or of perforation. Liver, spleen and kidneys had been so much altered by the injection as to render it impossible to decide whether they were the seat of pathological changes or not.

——Dr. Geo. A. Evans has removed from the city. His address is Peabody House, Yonkers, N. Y.

——The Regular Monthly Meetings of the Medical Society of the County of Kings are held at 8 P. M., on the third Tuesday of each month, at Everett Hall, 398 Fulton Street.

The June meeting will be held on the 17th, at which there will be presented the following papers:

Kumyss, by Dr. C. A. H. Szigethy.

Cerebral Syphilis, by Dr. L. C. Gray.

——New Members.—At the May meeting the following new members were elected: Charlotte M. Ford, Woman's Med. Coll., 1873; J. H. Hillyer, N. Y. Univ., 1876; W. B. Chase, Med. School Maine, 1867; W. Scott Smith, L. I. C. H., 1878; J. F. Valentine, Coll. P. and S., N. Y., 1879. The following were proposed for membership: Drs. J. F. Feeley, 296 Lorimer Street, E. D.; W. B. Hewett, 163 Prospect Place; L. B. Irish, 703 Fourth Avenue; J. S. King, 883 Myrtle Avenue; J. S. Perry, 161 Congress Street; J. H. Trent, 336 Ninth Street; E. A. Wheeler, 7 Bedford Avenue, E. D.; Aug. Wheelus, 141 Kent Street, Greenpoint.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

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(1878 to 1882.)

Drs. J. C. Shaw,	Drs. A. J. C. Skene,	Drs. E. N. Chapman,
J. D. Rushmore,	G. G. Hopkins,	J. S. Prout,
R. M. Wyckoff,	A. Mathewson,	F. W. Rockwell.

Chap. XI, Art. 2, of By-laws: "Any Member elected as Delegate to the Medical Society of the State of New York, who shall be unable to act as Delegate during two successive years, shall be considered to have vacated his position as Delegate."

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Bodkin,	Garrigues,	Schapps,
F. H. Colton,	Hawley,	Shaw,
Dodge,	Hutchison,	Sherwell,
Fessenden,	Mathewson,	Westbrook.

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Drs. T. P. Corbally, J. Walker, W. E. Griffiths, B. Edson, A. W. Ford.

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PUBLIC INSTRUCTION.

Drs. A. J. C. Skene, C. L. Mitchell, E. R. Squibb, J. T. Conkling, J. C. Hutchison.

PHYSICIANS' MUTUAL AID ASSOCIATION.

Drs. B. A. Segur, W. W. Reese, J. H. H. Burge, A. Hutchins, W. G. Russell.

PROCEEDINGS

OF THE

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

STATED MEETING, JUNE 17, 1879.

CEREBRAL SYPHILIS.

BY L. C. GRAY, M.D.

Cerebral syphilis is by no means so infrequent a disease as many suppose it to be; and this fact, when considered in conjunction with the delicacy and importance of the organ which it attacks, makes it a matter of daily necessity that we should promptly recognize the malady and treat it carefully. There is, moreover, a peculiarity about it which should add to our eagerness in the detection. Most of the primary and secondary venereal manifestations are more or less transitory, and often spontaneously cured, while it is the tertiary sequelæ that will not improve without treatment. But my experience has led me to believe that there is always a marked tendency for the worse in cerebral syphilis, which, although generally to be encountered in the tertiary stage, may yet break forth at any period, even within two months after the appearance of the primary sore, as in one of the cases to be detailed in this paper. Dwelling in the belief, therefore, that this disease, so common and so baleful, must be invested with a certain interest to the minds of all, I have ventured upon the simple narration of a few cases illustrative of the more usual types.

From these histories it will become evident that the symptoms are greatly diversified. And well they may be; because the pathological formations engendering them may have their site anywhere within the membranes, and exert their noxious influence upon widely different parts of the brain. It will thus come to pass that the symptomatology of cerebral syphilis will be co-extensive with the physiology of the most peerlessly complex organ of which physiologists have to

teach. The morbid changes are of two kinds. There may be diffuse infiltration or tumors of the dura mater and subarachnoid spaces, implicating the surrounding structures in their growth; or there may exist disease of the arteries at the base of the brain. The arterial degenerations are of the arteries composing the circle of Willis, and especially the internal carotids and their branches. The specific deposit begins between the inner coat of the vessel and the endothelium, narrowing the calibre of the blood-channel, or even absolutely obstructing it. The lesions are thus manifold in their consequences. The new formations and the infiltrations are irritative to the membranes and the nervous structures beneath, or they may be destructive to the gray matter of the convolutions, by causing the death of cells upon whose existence the function of the part depends; whilst the constriction or occlusion of the vessels diminishes or cuts off the aliment of the tissues, and correspondingly devitalizes them. Interference with the blood-current in the internal carotids and their offshoots, the chosen site of specific arterial alterations, is peculiarly disastrous; since the middle cerebral or Sylvian arteries, springing directly from the internal carotids, supply the corpora striata and optic thalami with branches which are terminal, so that there is no anastomozing and collateral circulation at hand to relieve these basal ganglia of the evils attendant upon a blockade of the blood-supply through their sole nutrient vessels.

The structures within the skull that are seized upon by cerebral syphilis are then, as it would seem, the dura mater, the gray surface or cortex of the brain, and the corpora striata and optic thalami. Our knowledge in regard to the ganglia mentioned last has received no increment from the immediate past. Modern science has, however, thrown much light upon the functions of the cortex and the dura mater. The experiments and observations of Fritsch and Hitzig, of Ferrier, of Carville and Duret, and of hosts of others in England, France, Germany, Italy and America, have established beyond a peradventure the fact that certain convolutions of the cortex are motor; or, to phrase it more plainly, that irritation of certain convolutions, as by electricity, will cause movements of isolated groups of muscles, and that removal or destruction of the gray matter of these convolutions will cause paralysis of these groups of muscles. The third left frontal convolution, occasionally the right one, is known to be connected with the memory of words and the faculty of speech. A healthy condition of certain portions of the cortex is necessary for the manifestation of normal intellectual action. Duret,* of Paris, has recently enriched physiology with many facts hitherto unknown

* Études expér. et clin. sur les traumatismes cérébraux. Duret, Paris, 1878.

with regard to the dura mater; and Bochefontaine* has honorably followed in his footsteps. These authors have demonstrated that electrical or mechanical irritation of the dura mater causes pain, varied disturbances of respiration and heart-beat, and muscular movements. These muscular spasms are distinguished from the spasms produced by irritation of a motor convolution in being more diffused, less localized, less measured. They are reflex movements—that is to say, a sensitive nerve is irritated, the irritation is transmitted inward to the gray centre of origin of that sensitive nerve, and thence transmuted outwardly into action along any one, two or more motor nerves that may happen to be in the neighborhood, and the resulting muscular movements are generalized and capricious. On the other hand, when the gray matter of a motor convolution is irritated, we irritate the gray centre of origin of a motor nerve, and the ensuing muscular movements are confined to the muscle or group of muscles to which that motor nerve is distributed. If, in addition, the salient fact be not obscured that at the base of the brain, for which syphilis has an especial predilection, lie all the cranial nerves beneath or within the membranes, we shall have completed a hasty and superficial survey of the different organs whose healthy play is interrupted, and shall be in a position to obtain some rough idea of the mode of origin of the symptoms in the following cases:

Case I.—Irish woman, aged 35; married. Has had headache all over head for the last two years, which began as a creeping sensation, and has now become intense, so that patient describes it as being "like a knife twisted around;" it also radiates at times into the teeth and face; has vomited occasionally. There also at first co-existed amblyopia, with hallucinations; pupils normal; pain worse at night; suffers occasionally from vertigo. There are two deep excavated scars on the forehead, one large, one small, produced by some thickly suppurative eruption, according to the patient. Married twelve years; four living children; lost first one of all from some unknown cause, and the last one, born four years ago, suffered greatly from "snuffles" in infancy. There have been two miscarriages in the last year.

Case II.—American, aged 25; single. Has had headache about six weeks over brows, almost unbearable at night, whilst it is very slight during the day-time; no nausea; at times the pain radiates along the upper branches of the fifth pair, and there is occasionally difficulty in keeping the eyelids open at the time of great pain. About two months ago patient had what he calls a chancre, and the inguinal glands are now enlarged greatly. Twenty-five days after his first consultation with me

* Arch de Physiol., Janv.-Févr., 1879.

the patient came for treatment; and upon examination I found that the left ear had become almost entirely deaf, whereas it had been unimpaired when I first saw him. Curious to say, after three days' treatment with one-sixteenth grain ter in die of corrosive sublimate the deafness disappeared altogether, at the same time that the headache grew to be barely perceptible.

Case III.—Irishman, aged 39; married. About a year ago patient began to suffer from headache over right side from brow to occiput, being greatest at a spot just below occipital protuberance, and along right side of nose, and always worse at night. This cephalalgia has been nearly constant, with occasional intervals of a few days—at one time of three weeks. Since the beginning of these symptoms there have been three paroxysms of exacerbation, during which the pain has become intense; the right ear has become entirely deaf and loud buzzing is heard in it; then ensues dizziness, and the stomach rejects everything, although there is no spontaneous vomiting. These paroxysms have lasted two or three days. Upon his first visit to me the patient's right eyelid drooped slightly, and together with the face on the same side it appeared fuller than the corresponding parts on the other side. This fullness came on after one of the paroxysms, and has been much more marked than at present. Pupils are normal; sore on penis eight years ago, suppurating considerably, followed by bubo. Maculated eruption on arms about a year after; has been married one year, but no children; has pains in shins, especially at night; no further evidence of syphilis is obtainable.

Case IV.—English woman, widow, aged 45; husband dead ten years; about a year ago there began a headache over the right side of head and vertex, and a neuralgia of the ophthalmic branch of the right trigeminus. The headache has since been constant. The patient describes the pain as thumping, with an occasional "shoot." At the present time there is also a paralysis of the motor oculi communis, causing ptosis, dilated pupil, external strabismus and immobility of the eye-ball. An examination of the throat and nostrils, kindly made by my friend, Dr. Thos. R. French, showed that there was ozæna and a localized pharyngitis. Patient has had seven children, who are all now living; and she has had three miscarriages—the first two having occurred in the fourth and fifth pregnancies respectively, and the last in the eighth utero-gestation. There was a pustular eruption on the forehead about fourteen months ago, and at this period patient suffered considerably from pains in one of her wrists. The present headache began shortly after she had ceased taking medicine which had been ordered for the eruption. Over the site of the eruption on the forehead there are some white, pit-like scars.

Case V.—Irish woman, aged 20, single. Has suffered from headache for some time, but cannot recollect how long; and it has always been worse nocturnally. Has suddenly been attacked with paralysis of the right face and eyelid. Tongue points straight. Dark-hued scars of some eruption on face and forehead. The girl's father volunteered the statement that she had inherited syphilis from him.

Case VI.—American, aged 34, married. Two days ago was suddenly paralyzed in right upper extremity. Paralysis motor. Has a difficulty in talking, which consists of an inability to get the words out, although he says he recollects them well enough—in other words, he suffers from ataxic aphasia. Six or seven years ago patient had gonorrhœa. Denies sore on penis, but has indurated glands in both groins. Has had slight, almost constant headache for several years past, not worse nocturnally.

Case VII.—German, male, aged 40, married. Paralyzed in right extremities, incompletely and motorially. Right face slightly paretic, but tongue points straight. Contracture of right leg marked. A tap upon the quadriceps extensor tendon of this leg produces a violent jerk forwards of the foot. When I take the foot in my hand and strongly and quickly flex it upon the leg, there ensues a rhythmical tremor of the whole extremity (spinal epilepsy). Has had two previous attacks of paralysis. There is ataxic aphasia. I was for some time at a loss to make a diagnosis in this case. There were no symptoms obtainable of arterial, renal or cardiac trouble, and repeated questioning could elicit no history of syphilis. After treating him, however, for nearly three months with but slight result, his wife informed me one day that he had an ulcer upon the leg which he seemed very anxious to conceal from me. I jumped at this clue, and put him upon the mixed treatment. I also intended to visit him, but as he lived out of town I failed to do so. The patient improved slightly, but soon became disheartened, and I lost sight of him for two months. At the end of that time his wife came to me to say that he had become much worse. The urine dribbled away involuntarily; fæces passed in the same way; could not walk alone; could not even sit up without support; was quite imbecile; cried and wept without cause; at times swayed to the left and fell; trembled greatly at times. I gave an unfavorable prognosis, and anticipated a speedy autopsy; but a recollection of my former suspicions caused me to write a prescription for the biniod. mercury and iodide potash in larger doses than before. In a week he was reported as somewhat better. In two weeks, to my amazement, he was walking about as intelligent as when I first saw him, and holding his urine as when he came to me, and has steadily improved since.

The prognosis in this disease is not so slight a matter of concern as

the prevalent opinion would have it. While the prospects of the patient's improvement or recovery under proper treatment are probably greater than in any other cerebral malady of similar magnitude, there is yet a certain proportion of cases in which serious incurable textural alterations will have occurred, entailing a residue of permanent impairment of function, notwithstanding that much may have been gained. It is a fortunate circumstance that the gravity of the symptoms usually brings patients to us at an early period of the disease, and before irreparable mischief has been done. The promptness and thoroughness of relief, however, is usually gratifying, and it will happen at times to be almost startling. In Case II, for instance, one ear became entirely deaf, but was as entirely cured in three days. Again, in Case VII, the man became imbecile, unable to dress himself, or rise from his chair, or retain his water, and fourteen days afterward he walks about, dresses himself, is quite bright mentally, and regulates the passage of his urine with but a slight effort.

I have obtained the most success in cerebral syphilis from the so-called "mixed treatment," except in the very early cases; and this is the more curious because the malady is, as has already been said, generally within the tertiary period. As a rule, the combination of the biniodide of mercury with the iodide of potash is well borne by the stomach, if given well diluted in a wineglass of water, and after meals; if, however, it should cause gastric disturbance, the mercery and iodide of potash may be given separately. The French granules of Garnier and Lamoureux, each containing one-fifth grain of the protiodide of mercury, will be found of value when the bichloride irritates the stomach, and they should be commenced in doses of one granule three times daily after meals, increasing by one granule every third or fourth day, until the desired effect is obtained. The American protiodide has proved unreliable in my hands and in those of many others. The iodide of potash can be exhibited in saturated solution, made of equal parts of the salt and water, so that each minim of the solution represents a grain of the drug. It is claimed that the addition of the carbonate of ammonia to the iodide of potash will greatly increase the therapeutic effects of the latter. Dr. Sweeny, of Carlow, Ireland, who has tested this point upon a large scale, asserts that 4 grains of the iodide of potash, combined with $2\frac{1}{2}$ grains of carbonate of ammonia, will produce the same result as $6\frac{2}{3}$ grains of the iodide of potash alone.* This combination will prove convenient when large doses of the iodide cannot be stomached. I have not always found it necessary to salivate patients. The best rule, I think, is to administer mercury, when given either with or without iodide of potash,

* Brit. Med. Journ., Jan. 10th, 1874, No. 980.

in growing doses until relief comes or until there is a slight tenderness of the jaws; and in most cases complete relief will be obtained long before there is any effect upon the gums. The iodide should be increased in dosage, too, according to the indications. My experience with inunction has been very unsatisfactory—so much so, that I have given up its use, except in such patients as cannot take mercury internally, or in those whose symptoms are grave, and imperatively demand prompt and vigorous attention. It is an uncleanly method, it is unreliable, and the amount of the drug that will be absorbed can never be accurately estimated. The general health should not be overlooked, and should be treated if it be impaired in a greater degree than is accounted for by the cerebral derangement. Most patients will display a coated tongue, occasional nausea, perhaps even emesis, difficulty of digestion and other signs of stomachic derangement. This is, of course, at first a reflex from the diseased cerebrum; but it can be readily understood that the abnormal innervation may in the course of time induce local changes in the stomach and its satellite structures that may seriously interfere with digestion and absorption. It often, therefore, becomes an important question as to whether or not these symptoms shall be lessened before the specific treatment is begun. The specific treatment itself will usually cause a gradual amelioration in this respect; and it is impossible to say whether this ensues from the decrease in the cerebral lesions, or whether the mercury, possessing in a valuable degree the power of increasing the hepatic secretions, as Rutherford has shown, has in so doing exerted the familiar sedative influence upon the gastric mucous membrane, or whether it is from the conjunction of these actions. In some individuals, however, in whom this stomachic irritability is exaggerated and out of proportion to the cerebral symptoms, and in whom the cerebral symptoms as well are not urgent, it is best to devote a few days to the stomach, or else it will be found difficult or impossible to administer the iodides and mercurials in sufficient doses. A few grains of calomel, or an occasional wine-glassful of Hunyadi Janos water, or a brisk purgative in the more marked cases, to be followed by a few days of moderate alkaline treatment, will often be of marked benefit. The duration of the treatment cannot, in my opinion, be laid down mathematically, but should rather be determined by an intelligent and prudent survey of the circumstances of each case. It should be made the rule to continue medication at least six months after the disease has ceased to improve; and it would be much more prudent, in view of the gravity of the disease and the opinions of syphilographers, to keep the patient under treatment either continually or intermittently for a year and a half.

DISCUSSION.

Dr. Skene said that he did not expect to add anything to the valuable paper read by Dr. Gray, but he desired to raise some questions regarding the accuracy of the diagnosis of the cases reported. It appeared to him that among the cases related only one (the last) gave evidence of cerebral syphilis. That a patient may have headache and paralysis of some of the facial nerves from syphilis is well known; but it does not follow that such symptoms indicate cerebral syphilis. Periostitis of the cranium may cause all the phenomena described, including disturbed nerve function and deafness, and still the brain may remain free from specific disease. He had been inclined to believe that syphilis affected the brain less often than other organs and tissues of the body, and we required much knowledge and should exercise great caution in the diagnosis of this manifestation of syphilis. It is of very great importance to detect this disease of the brain, because of its grave tendencies. What we require, and what he would ask the author for, is some additional facts on this subject of diagnosis. He would oppose diagnosticating syphilis of the brain upon the evidence given in the history of cases reported in the paper.

Regarding the use of mercury in the treatment of cerebral syphilis he had nothing to offer. In the management of inherited syphilis he had had large experience, and had found that of all preparations of mercury, hydrarg. sub-mur., in very small doses, had given the best results in his hands.

Dr. Armor not having heard the detailed clinical history of the cases referred to in the paper, had nothing to suggest as to their diagnosis or treatment. But the use of mercury in syphilis and many chronic constitutional states, referred to in the closing part of the paper, is a question in which he had always felt great interest, for good observers hold quite opposite opinions on the subject. Mercury is an old remedy; it has been long on trial, and has been much abused both by those who have used it and those who have not; and, on the whole, has stood the test of time and experience beyond most remedies of the Materia Medica. He called attention specially to the bichloride of mercury (corrosive sublimate) as a valuable constitutional alterative in certain conditions described. Many of these cases may or may not be of syphilitic origin; but he pointed out the fact that it was a remedy of great value in promoting absorption of lowly vitalized products of inflammation. It had the remarkable power apparently of separating lowly vitalized from the more highly vitalized tissues of the body, and of rendering such products capable

of absorption and elimination from the system. It tends also, in common with iodine and its preparations, to quicken retrograde metamorphosis of tissue, as evidenced by the increased solid constituents of the urine. Hence its value in certain scrofulous conditions of constitution. Dr. Graves, of Dublin, long since called attention to the specific influence of the bichloride of mercury and bark in this general diathesis, and subsequent experience of the profession has abundantly confirmed his observations. It acts not only as an eliminative and tonic alterative in such cases, freeing the tissues from lowly vitalized products, but it has been found, when judiciously used in small doses, to increase the red corpuscles of the blood, and improve the general condition of nutrition, thus acting as an *alterative tonic.*

He alluded also to its use in certain degenerative changes, especially degenerative changes in the arterial system (atheroma).

In many obscure constitutional states, whether we suspect syphilis or not, it may be well to give the patient the benefit of an alterative course of the bichloride of mercury and bark. This may be followed by iodide of potassium, and other remedies calculated to improve the general condition of nutrition.

Of the general value of mercury in many cases of chronic inflammation he would not then speak. That it exerts such influence he had but little doubt. It is a remedy, however, that is greatly liable to be abused in such cases, and should therefore be used with caution and judgment.

Dr. Gray stated that generally in medicine a diagnosis was made by excluding all diseases but one that could produce symptoms similar to those under consideration, and thus determining that this one did produce them. Cerebral syphilis was no exception to this rule. A man comes complaining of headache that has been persistent for some time, perhaps worse at night or only present at night. We exclude renal disease. We have no history of malaria. Simple meningitis is so rare that we leave it out of consideration. We exclude tubercular meningitis because of the absence of any tubercular history. We then affirm positively that there is nothing that will produce this headache but cerebral syphilis and tumor. We obtain evidences of syphilis. They are imperfect and fragmentary, perhaps, or it may be our fortune to find them strong and conclusive. In any case we conclude that this syphilis, whose existence is thus more or less imperfectly revealed, is the cause of the headache. Of course it is *possible* that a man may have had syphilis, and yet this headache be due to some tumor that is not syphilitic; but it is not *probable.* Treatment is so prompt in affording relief that the relief becomes of diagnostic value. At all events, we have based our diagnosis upon *strong probabilities*, and the overwhelming majority of

diagnoses in medicine, even by the most expert and in the case of diseases that may be handled by the fingers, are made upon no better evidence. All the cases in paper were accompanied by this kind of testimony.

KUMYS.

BY C. A. H. DE SZIGETHY, M.D.

This fermented milk preparation is generally known by the name of kumys, without any regard to the kind of milk from which it is prepared, although the Tartars, with whom this beverage originated, designate by kumys only that preparation which is obtained by the vinous fermentation from the mare's milk in contrast to that obtained from the cow's milk, which latter they call Airen or Arjan. This Arjan they use also, but only during the winter, when mare's milk fails them. The latter, however, they always prefer, especially for the reason of its containing more spirit, which they call Arika.

We will have to confine our observations to the fermented cow's milk proper, as the only practically accessible one for our special purpose, as it is only on the vast steppes of Russia proper where that particular race of horses can be found which alone can supply the material for the original kumys.

To do this we may be very well contented, as nearly all the impartial observers agree to the nearly equal therapeutical efficacy of the kumys prepared from cow's milk to that prepared from mare's milk, although it might, perhaps, be more desirable could the mare's milk be substituted by that of the ass's milk, an animal of the same equine species, the analysis of whose milk shows a closer resemblance to mare's milk, especially in those constituents mostly required for this special purpose. The following table of comparison, by Moleshott, will show this best:

In 1,000 parts of	Woman's.	Cow's.	Goat's.	Ewe's.	Ass'.	Mare's Milk
Water	889.08	857.05	863.58	839.89	910.24	828.37
Solids	110.92	142.95	136.42	160.11	89.76	171.63
Casein	39.24	48.28	33.60	53.42	20.18	16.41
Albumen		5.76	12.99			
Butter	26.66	43.05	43.57	58.90	12.56	68.72
Sugar	43.64	40.37	40.04	40.98	57.02	86.50
Salts	1.28	5.48	6.22	6.81		0.29

The ana'ysis of kumys differs from the above by the presence of the following new constituents derived by the fermentation of the above ones, as that of carbonic acid, of alcohol and of lactic acid. The proportion of these ingredients of the kumys vary greatly, according to the age of the same; for instance, kumys of

1 day's age	contains	about	12.3	per 1,000	of alcohol.
2	"	"	16.5	"	"
3	"	"	17.4	"	"
5	"	"	18.5	"	"
9	"	"	19.6	"	"
16	"	"	20.1	"	"
5 months' age	"		32.3	"	"

Kumys of 1 day's age	contains		18.0	per 1,000	of sugar.
" 2	"	"	14.0	"	"
" 3	"	"	12.0	"	"
" 5	"	"	9.5	"	"
" 9	"	"	7.7	"	"
" 15	"	"	6.1	"	"
" 5 mos'. age	"		traces		"
" 1 day's age	"		4.7	per 1,000	of lactic acid.
" 16	"	"	8.3	"	"

The other constituents of the kumys vary but very little from that of the milk out of which it has been prepared.

Hartier's analysis of a 5 months' old kumys gave the following results:

Carbonic acid,	18.6	per 1,000
Alcohol,	32.3	"
Fat,	10.1	"
Lactic acid, glycerine, succinic acid, etc.,	29.2	"
Casein and salts,	12.1	"

By the above it can be seen that kumys is not a fermented, but rather a fermenting beverage, which possesses, in a very high degree, the property of transforming milk-sugar, as well as grape-sugar, into alcohol and carbonic acid. The rapidity of the after-formation depends, undoubtedly, a great deal upon the mode of preparing the same, which not only differs in different countries, but even among different producers in the same country.

The most stable, tasteful and uniform kumys (Arjan) I have met with in any country is that prepared by Dr. Brush, in Westchester County, N. Y., who prepares it, as I understood, in a temperature below 15° C. (60° F.)

From among the many complicated and laborious methods of preparing the kumys I select two, which I have found to be the simplest, so that those who cannot procure any of a standard quality may have the benefit of a tolerably good substitute.

Take about 9 litres (5 quarts) of freshly milked cow's milk, 250 grammes (one-half tt.) of white or of grape sugar, and heat it to 30° or 32° C. (86° to 90° F.), then add about 8 grammes (2 drachms) of compressed yeast and stir for a few minutes. After this, bottle the same into champagne bottles, but do not fill the bottles up to the cork. The bottles must then be shaken a few times for the next three or four days, by which time the strongly effervescing milkwine will be ready for use.

Previous to the bottling, bottles and corks must be well cleansed with a solution of soda.

Another way of preparing kumys that will never cause any diarrhœa and is very nutritious, is the following: Dissolve ½ kilogramme (one tt., 4 ounces) of finely powdered milk-sugar in 3 litres (6 pints) of water; of this solution, mix 1 litre with 3 litres of skimmed milk that has stood over night; to this add ½ to one bottle of already prepared kumys; then let this mixture stand in a temperature of about 21° C. (70° F.) till some carbonic acid bubbles begin to form, then add the remaining 2 litres of the first sugar of milk solution with 6 litres more of a well-skimmed milk, and churn the whole mass for about 15 or 20 minutes in a new churn; after this, let it stand for a day and then churn again for an hour before bottling it into well-secured champagne bottles. These bottles must then be kept for 6 or 8 hours longer in a temperature of about 21° C. before they are removed to a cooler place.

Kumys deprived of its casein can be prepared in a similar way, only that sweet whey must be used instead of the milk.

The taste of all these sparkling preparations will be pleasantly tart, with a flavor of almonds.

Judging by the methods of preparing the kumys and by the constituents of the same as seen above, we can easily understand its physiological action and its therapeutical worth.

The *alcohol* in the same will help the formation of fat, will lower the temperature of the body and produce sleep.

The *sugar of milk* (*lactin*) therein will assist to increase the weight of the body.

The *lactic acid* will lower the temperature of the body and the frequency of the pulse, and will diminish the secretion of the mucous membranes.

The *casein* will effect a restoration of organic tissues.

The *carbonic acid* in it will diminish the frequency of the heart's contraction, will increase the energy of the heart's impulse, produce diuresis like lactic acid, and calm gastric irritation.

According to the above, kumys may well be proclaimed the most decided enemy of emaciation and as possessing the highest powers of nutrition wherefore it cannot justly be looked upon as "only a roundabout way of preparing milk-punch"; as by the fermentation to which it has been and still is subjected, it has been changed into an already digested milk, whose casein has become quite minutely subdivided, and rendered less liable to being coagulated into large lumps, and consequently is made readier for absorption.

The therapeutical indications follow quite rationally from the above.

In Russia, where it is in popular use since time immemorial, it is looked upon as the *only* remedy for consumption, and deservedly, too.

All the consumptive patients who subject themselves to a kumys cure show, as the first objective symptom of improvement, a changed rosy complexion, that manifests itself already in the course of the first weeks of the treatment; this is so general, that it is called the "kumys complexion." This may be caused partly by the change in the quality of the blood and partly by the way of its distribution.

The blood is found to be greatly changed; it has become thicker, contains more fibrin, more hæmato-globulin and less serum. These changes are easily understood when we take in account its easy digestibility and its property of being absorbable with hardly any residuum. Its effect can be compared to that produced by transfusion. It is, farther, not an improbable supposition, that there are factors in the kumys which produce an afflux to the kidneys and to the skin. The diminution of the mucous secretions by the use of the kumys may be explained also as depending upon the increased antagonistic functions of the beforementioned systems.

The increased irritation of the vasomotor centres necessarily changes the lumen of the blood vessels in certain districts, some of them becoming more permeable to the circulation of the blood. However this may be, so much is it put beyond doubt by all observers, that medicine is in possession of no other blood-restorer so speedy and sure as kumys; wherefore its employment is advisable in all those diseases which can be cured by the improvement of the mass of the blood—that is to say, in such diseases in which a diminution of the solid ingredients of the blood do exist.

In brief, we may sum up the following indications for the therapeutical employment of the kumys:

1. *Anæmia* in all its various forms, and with all its consecutive com-

plaints; 2. Chronic catarrhs; 3. Chlorosis; 4. Chronic phthisis pulmonum (in its torpid form); 5. Scurvy; 6. Convalescence from long acute diseases—after profuse hemorrhages; after emaciation from extensive sloughing, blenorrhagias, diarrhœas; after protracted lactation, etc.; 7. The adynamic stages of all acute diseases; 8. Dysmenorrhœa; 9. Hydræmia, scrofulosis, leucæmia; 10. Hysteria and hypochondriasis (based upon anæmia); 11. Disorders of digestion and sanguinification; 12. Chronic and acute catarrh of the stomach and of the intestines.

In all these morbid states kumys can be employed with the most brilliant success, and every one may convince himself by his own observations that the effect of the kumys treatment will be the more striking, the greater the decay of strength has been.

Contra-indications for the employment of kumys are:

Plethora; apoplectic habitus; hæmorrhoids; epistaxis; menorrhagias; organic diseases: of the heart; of the blood vessels; of the nerve centres; of the kidneys; of the liver; of the spleen; urinary calculi.

The quantity of the kumys used per diem is very variable; one to five bottles a day will be the quantity generally to be used. The daily dose at the beginning of the treatment ought never to exceed one bottle. A glassful ought to be taken at longer or at shorter intervals. Every subsequent day the quantity may be increased with two or three glassfuls, until the total amount at the end of the first week will reach about five bottles, of which three bottles ought to be used until 1 P. M., and the remaining two others in the course of the afternoon. The time between 12 and 4 P. M. ought to be devoted exclusively to dinner and sleep. The dinner may consist of soups and of any lean meat (except pork or goose). Where there is a tendency to constipation, raw fruits, as berries, oranges, etc., may be taken; but where a tendency to diarrhœa exists, milk, fruits, vegetables, etc., are to be scrupulously avoided. At dinner-time a wine-glassful of wine, or beer, or porter may be taken (claret excepted). At supper, if required, a chop, cutlet or roast meat may be taken. Tea, coffee and alcoholic stimulants should be generally avoided; also cold baths. Moderate exercise is desirable. Patients confined to bed may take about six tumblerfuls a day. The employment of kumys does not interfere with any other course of treatment. Whenever a desire of sleep should be felt it should always be at once yielded to, and nothing ought to interfere with the patient's sleeping as long as he likes. When given to children under one year of age, the contents of the bottle should always be emptied into a pitcher, and from that into another, until all the gas is eliminated; then take what is necessary for one dose, and pour the remainder back into a bottle, cork, and keep it in a temperature between 10° and 16° C. (50° and 60°

F.) When always re-corked and replaced into a cool place it will keep for a day. It must never be warmed, sweetened or diluted, and not be given less than two hours after any other form of milk.

Children from three weeks to three months of age suffering from defective nutrition, and children over three months suffering from cholera infantum, should, for the first twenty-four hours, be given one teaspoonful every hour. Children over three months of age suffering from any other form of defective nutrition than cholera infantum can take kumys from a nursing bottle, giving them just half the quantity they have been in the habit of taking of other food.

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DISCUSSION.

Dr. Armor said that he had no experience in the use of kumys, but doubted whether it had any advantage over the ordinary so-called *milk treatment* of disease; indeed he feared that the profession might be misled by substituting kumys for ordinary milk. He had great confidence in an almost exclusive milk diet in the treatment of many chronic affections, and doubted whether the profession fully appreciated its great value. He spoke of its use as suggested by Dr. Weir Mitchell, of Philadelphia, for the purpose of *forcing nutrition* in certain conditions of anæmia with wasting of the tissues. By gradually increasing the quantity, giving it in *definite quantities* at *definite* and short intervals, the patient may be made to tolerate and digest large quantities of milk during twenty-four hours; it may be readily pushed from two to three and four or six pints in twenty-four hours without disturbing the patient's stomach. No food requires so little conversion as milk; indeed, all alimentary substances must be reduced to a state of milk (chyle) before they can be appropriated by the tissues. It appears to be Nature's type of food. This may account for the marvelous effects sometimes pro-

duced by forced nutrition. We often fail in the milk cure for want of perseverance in the use of the remedy. We have also prejudices to deal with; these must be done away with, for it is often the merest fancy that people cannot take milk. We should have definite understandings with our patients as to the time they will be required to take milk. It may be best to keep them on it for weeks and months. Chronic cases require chronic remedies. At the end of three weeks or more it may be well to add a thin slice of stale bread three times a day, and by and by perhaps a mutton-chop. By such definite directions on the part of the physician and obedience on the part of the patient, marvelous cures may sometimes be wrought without drugs! Certainly such forced nutrition, so easily asimilated, often greatly adds to the efficacy of general tonic and restorative remedies.

The milk cure is specially efficacious in all derangements of primary assimilation resulting from gastric and gastro-duodenal catarrh. In such cases the stomach, small intestines and liver are apt to become complicated in morbid action. Patients have bad digestion, loss of appetite, furred and flabby tongues, flatulence and bad nutrition, and not infrequently mental depression bordering on hypochondria. This condition of chronic gastric catarrh is undoubtedly a very common one—much more so than is generally supposed, and may be frequently relieved, if not radically cured, by the vigorous and persevering use of a milk diet. Rest of the diseased mucous membrane in such cases is an essential element of cure, and no article of diet can give such rest as milk and lime-water or seltzer water. The alkaline carbonates are valuable additions to the milk diet. They should, of course, be given on an empty stomach in such a way as not to interfere with digestion. The reason why such a variety of ailments is often cured by a rigid course of dietetics, in conjunction with perhaps alkaline sulphur mineral waters, is that gastro-intestinal catarrh sustains a primary and causative relation to such special ailments. Correct the disturbed conditions of primary assimilation, and many other ailments disappear as by magic!

The milk diet may also be of use in certain derangements of secondary assimilation. Not infrequently the tissues are burdened by an excess of unappropriated and unassimilable material; more nutrition gains entrance into the blood than can be appropriated by the natural and healthy growth of the tissues; unoxidized compounds accumulate in the blood and tissues, and, as a result, the excretory organs are burdened in their efforts at elimination. In such conditions of morbid plethora the tissues may be said to be well manured but badly drained. What the patient needs in such cases is less food and better drainage; and nothing accomplishes this so well as a light milk diet, with an occa-

sional blue pill, followed by alkaline saline laxatives. By and by tonics may be added with advantage. Out-door exercise should also be insisted upon.

Attention was called in this connection to the value of buttermilk as an article of diet, or rather of drink. Of late it had attracted a good deal of attention in the treatment of diabetes, and was perhaps valuable on account of its richness in lactic acid. It is a favorite German remedy. A standing prescription with a distinguished German practitioner for almost all his patients was, "When you are hungry, eat buttermilk ; when you are thirsty, drink it."

In conclusion, Dr. Armor urged the importance of looking well to the great system of nutrition, for the more we analyze disease, the more we shall find that a host of undefinable human ailments have their origin in deranged assimilation—primary or secondary, or both. If kumys proves to be a valuable alimentary substance, let us give it a fair trial ; but we should be slow to have it take the place of that which is so readily obtained and which has stood so well the test of experience.

Dr. Gray spoke of a novel use of milk. M. Biot, in some late numbers of the *Revue Mensuelle*, had published a series of cases of acute articular rheumatism, treated by the milk diet. Salycilate of soda was used to relieve the pain, where an analgesic was required. If the elaborate and apparently reliable tables were to be trusted, this method gave better results than the alkaline method. Dr. Gray had treated one very satisfactorily. In regard to the effect obtained from small doses of the bichloride of mercury, he was inclined to think that this was different from the effect obtained from large doses. Rutherford had shown that corrosive sublimate increased all the hepatic secretions, not alone the bile. We know to-day that the liver has manifold functions. It secretes and excretes bile, it secretes and excretes sugar, the blood coming from it is richer in white-blood corpuscles and poorer in fibrine than the blood going to it. It seems warrantable, then, to assume that corrosive sublimate in small doses produces its effect by some action upon the complex functions of the liver. He had used this form of mercury with excellent effect in cases of chronic arterial, cardiac and renal disease within what Dr. Armor happily styles "the degenerative period" of life.

Dr. Vrooman: Some time ago I saw the milk treatment of cystitis recommended in one of the medical journals, and gave it a trial among some of my dispensary patients last summer. In only one case were my instructions with reference to food carried out—the other patients resuming their ordinary diet within twenty-four hours after commencing the milk treatment.

The patient with whom the treatment was successful was a female,

probably between thirty and forty years of age, robust, and apparently in good health, except that she was and had been suffering for a month or more from a subacute inflammation of the bladder. I do not remember the history of the case, or the cause of her trouble, if this was ascertained at the time. She had, I believe, been under medical treatment before coming to the dispensary, but not within a week or more of the time I saw her. I gave her no medicine, and merely recommended her to take as little exercise as possible, and to take no other food or drink than pure cow's milk, using from half a pint to a pint at a time, and taking it as often as she felt inclined. The patient returned in about four days, bringing a quantity of her urine, which I now found to be nearly free from mucus, and telling me that her symptoms were almost entirely relieved. She complained of faintness from hunger, but continued an exclusive milk diet a few days longer, and then gradually resumed the use of more hearty but easily digested aliment. I saw her some time afterwards, completely restored to health.

The point of interest in this case is that the patient almost immediately recovered upon an exclusive milk diet, without taking any medicinal agent, and without the "moral influence" of a pretense of taking medicine.

BROOKLYN ANATOMICAL AND SURGICAL CLUB.

Stated Meeting, April 21st, 1879.—Continued.

The President, Dr. L. S. Pilcher, in the chair.

ACUTE FATAL ŒDEMA OF THE LUNGS.

Dr. H. F. Williams related the following case:

Mrs. W., aged about fifty years, in the enjoyment of good general health, spent the afternoon of March 21st, 1879, in shopping. Returning home, she partook of a light supper, spent the evening with her family, being engaged in some form of needle-work, and displaying a greater degree of vivacity and flow of spirits than usual. Retired about half-past ten o'clock. Soon after getting into bed complained of a feeling of dyspnœa; not relieved by sitting up; continued to rapidly become more urgent. Her physician, Dr. Wm. Swift, was summoned, and was by her side without loss of time. Found the patient sitting up and

struggling for breath; face cyanotic, a constant cough, at first dry, then expelling small quantities of frothy mucus; later, with the help of efforts at artificial respiration, welling up mouthful after mouthful. No loss of consciousness, no paralysis of the extremities. Dr. Williams arrived fifteen minutes after Dr. Swift, and, at the most, not more than twenty-five minutes after the beginning of the attack. Respiration was already practically stopped. After an hypodermic injection of five minims of amyl nitrite there was one slight effort at inspiration. Attempts at artificial respiration were made, but without other effect than to cause frothy mucus to pour from her nose and mouth. She died in a state of cyanosis.

Autopsy, 38 hours after death. Present, Drs. Wm. Swift, L. S. Pilcher and H. F. Williams. Rigor mortis present; body well nourished.

Abdomen considerably tympanitic.

Pericardium normal; small amount of serum in sac.

Heart in systole; no clots in either cavity; valves healthy and competent, as proved by hydrostatic tests; slight atheromatous deposit in aorta immediately above semi-lunar valves; commencing calcification of coronary arteries; walls of right ventricle abnormally thin, soft, presenting gross appearances of fatty degeneration; walls of left ventricle firm and hypertrophied.

Lungs.—Small amount of serum in both pleural cavities; pleuræ normal; both lungs œdematous throughout their whole extent; frothy serum issuing freely in the course of incisions into its substance; the left lung was uniformly affected, but in the right the superior lobe was more intensely affected. The pulmonary artery and veins were dissected and examined from the heart to their larger ramifications; nothing abnormal found in them. Some of the bronchial glands were enlarged, melanotic and calcified.

Stomach contained a quantity of fluid ingesta, and was distended with gas. Its walls appeared thin, more especially at the cardiac end.

Liver intensely congested, otherwise normal; gall bladder contained a small calculus.

Kidneys intensely congested, otherwise normal.

Intestines healthy; somewhat distended with gas; no collection of fæcal matter in any part.

Bladder normal and empty.

Uterus normal in position; cervix enlarged, abnormally hard; the seat of areolar hyperplasia.

Brain not examined.

Remarks.—Œdema of the lungs is regarded as a secondary affection. This case is peculiar in so far as the disease, which was most extensive, and the one above all others that would seem less likely to be associated

with œdema of the lungs, did not, to say the least, prevent fatal œdema taking place.

The right ventricle was shown by the autopsy to be in a state of fatty degeneration; the heart substance softened, yet, notwithstanding this, it performed its function with a force sufficient to overwhelm the lungs and to cause a transudation of serum into the pleural and pericardial cavities. This is the heart that would have given us trouble had only a small portion of either lung become pneumonic. Heart clot would have been inevitable, and our dyspnœa, apnœa and death would not, as in this case, be involved in such obscurity.

This case could be dismissed by a coroner's jury as one of angina pectoris, shock from pain, paralysis of the sympathetic system or congestive chill; but the theory I will advance will at least appear plausible, and I only regret that we were not allowed to examine the brain to prove it.

I conceive the chain of events in this case to have been as follows:

The patient, after an exhaustive afternoon at shopping, with an empty stomach, came home, partook of a light supper (this from necessity, since her stomach and intestines were disturbed and distended by gas). This distension may have caused more or less uneasiness during the evening while sitting, but immediately on assuming the supine position the cardiac end of the stomach encroached upon the already sensitive heart. The hypertrophied left ventricle went to work with a force entirely disproportionate with the tensile capacity of the cerebral arteries. (We are justified in assuming this, since abundant evidence of fatty and calcareous degeneration was found in arteries and organs in other regions of the body.) This force proved most severe in the region of the medulla oblongata and pons varolii, and, by a selection that we are manifestly unable to appreciate, caused a rupture of the walls of the fourth ventricle.

That this rupture was small and the consequent hemorrhage slow, can be inferred from the fact that it required about twenty-five minutes to so distend the cavity that a paralyzing force was exerted upon its floor, and hence upon the deep origin of the pneumogastric nerves. This distension becoming greater, the entire medulla became compressed and paralyzed.

Opposed to this explanation is the condition of the heart at systole; and that although the heart derives its motor power from the pneumogastric, there was energy sufficient to produce the œdema. This, however, may be reconciled by remembering that the direct cardiac stimulants—whisky, ammonia and amyl—may have come to the heart's rescue, and before it had time to declare its weakness death had taken place by apnœa.

DOUBLE NEPHRO-LITHIASIS; NEPHRITIC ABSCESS ON ONE SIDE, WITH LUMBAR FISTULA.

Dr. F. W. Rockwell presented two kidneys containing calculi:

One, the right, was enlarged to double its usual size, and its substance was replaced by three large purulent cysts, the walls of which were sacculated, as if several smaller cysts had combined in forming the ones still present; the superior half of the organ was occupied by the largest of these cysts, the middle and inferior cysts being smaller in size; these cysts each communicated with the pelvis of the organ by small apertures. In the cavity of the pelvis, which was not materially dilated, lay a calculus which filled it. From this central calculus extended two arms, which passed through the small apertures communicating with the superior and inferior cysts, and there became greatly enlarged, thus forming a large, irregular mass, inextricably entangled in the cavities and canals of the altered organ; weight, 170 grains.

The left kidney was enlarged, but apparently healthy in its structure. Within its pelvis, and extending into the inferior infundibulum, lay a flattened rod-like calculus, about one and a half inches long. The chemical composition of these calculi was of uric acid, with traces of the urates of soda, potash and ammonia; a small amount of the salts of lime and of animal matter was also present.

The subject from whom the accompanying specimens were removed first came under my notice in March last. Some two and a half years previously he had been subjected to a violent and prolonged chilling, which was followed by an irregular fever of an intermittent type, chills occurring at intervals of a few days, and followed by pains in the back and hepatic region; febrile disturbance and nausea or vomiting were supposed to indicate ordinary malarial poisoning, and for some weeks the patient was treated under this supposition. From his early boyhood he had been subject to attacks of "gravel" and the occasional presence of muco-pus in the urine, so that an increased and more frequent disturbance of this nature hardly attracted his attention. His habits had been of the most irregular character, and several attacks of delirium tremens had reduced his strength, so that he was not surprised at the rapid emaciation which followed this illness, nor at the appearance of a rapidly increasing tumor which now made its appearance over the liver. The pain of this swelling, and a slight jaundice which accompanied it, served to distract the patient's attention from his other symptoms, and also to deceive his physicians, who seem to have regarded the disease as hepatic abscess. For two or three months the tumor gradually increased in size, during which time the patient was under the care of several of our prominent physicians and surgeons, until finally, sup-

posing the abscess about to burst in the right hypochondriac region, the surgeon under whose care he then was plunged a bistoury into the mass at that point; no pus followed the puncture, and poultices were accordingly applied.

After two or three days, however, rupture suddenly occurred spontaneously in the lumbar region, and a large quantity of matter flowed away, to the great temporary relief of the patient.

The opening, however, remained patulous, and a fistula resulted, from which a thin, watery pus exuded for the next two years, at which time the case came under my observation.

At this time the patient presented the appearance of a man suffering from some deeply seated malignant disease. He was emaciated and worn; his pulse was quick, irritable and weak; the skin pallid and covered with a cold sweat; he was cachectic and complained of dull pains over the kidneys and liver. At times this pain became lancinating or burning, when large doses of morphia were insufficient to do more than allay it.

Upon physical examination, I found a large area of dullness extending over the right hypochondriac and epigastric regions. The superior boundary of this area was on a level with the third rib; the inferior reached about 1½ or 2 inches below the free border of the ribs. Longitudinally the dullness extended well over onto the left side, covering the pyloric end of the stomach. Externally several large veins were seen coursing over the hepatic region, while the difference in measurement of the two sides gave an increase of nearly two inches in favor of the right. The lungs seemed healthy. The abdominal cavity was distended with fluid. Posteriorly a fistulous opening existed, being situated about 2 inches above the crest of the ileum, and 4 or 4½ from the median line. A probe passed into this tract passed downward and forward, but revealed nothing as to the probable source of its formation.

The urine was loaded with muco-pus, and all the symptoms of a chronic cystitis were present. The patient gave me the history above narrated; but added that during his youth he suffered from pain in his *left* kidney, and that the right had been involved only since the commencement of his present illness, two years ago. An examination of the fluid discharged from the fistula gave only negative results. No trace of any urinary elements was found—simply pus.

The patient was put upon a tonic and supporting plan, and seemed to improve for a week or two, but finally sank exhausted about six weeks after I first saw him.

During his life I balanced between two opinions as to the diagnosis in his case. The rapid enlargement, ascites, jaundice, pain and cachexia,

the tortuous veins and general feel of the tumor in the hypochondrium, made me suspicious of a malignant growth in or near the liver; while the situation of the fistula, the history of chills, fever, emaciation and hectic, followed by discharge of pure pus, made me equally inclined to regard a pyelo-nephritis as the foundation of his trouble. His history of "gravel" in youth, and frequent pyrexia and present cystitis, all pointed to the latter opinion as the correct one; yet up to the day of his death I confess to a strong suspicion that a malignant tumor of the liver or kidney complicated his case.

At the autopsy, which was made about 24 hours after death, and at which I was kindly assisted by Dr. B. F. Westbrook, the following appearances were noted:

Abdominal cavity contained about two gallons of pale, straw-colored serum. The liver greatly enlarged, especially in its right lobe, and extending over the limits mentioned above, was found to be lying over an indistinct mass which seemed to form a part of it, and to hold it down against the posterior abdominal walls. This mass proved to be the result of a general inflammation of all the structures in the vicinity, matting them into an indistinguishable tumor, in the midst of which lay the shell of the right kidney, as seen in the specimen before you.

From this kidney a fistulous tract led downward, backward and then upward, terminating in the lumbar opening.

The whole abdominal peritoneum was thickened, in some places having reached a measurement of three or four lines.

AN ACT

GOVERNING THE SALE OF DRUGS AND POISONS IN THE COUNTY OF KINGS, STATE OF NEW YORK.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. It shall be unlawful from and after the first day of October, one thousand eight hundred and seventy-nine, for any person, unless a registered pharmacist within the meaning of this act, to open or conduct any pharmacy or store for retailing, dispensing, or compounding medicines or poisons, or for any one not a registered pharmacist to prepare physicians' prescriptions, except under the supervision of a registered pharmacist in the County of Kings.

§ 2. Any person in order to be registered shall be either a graduate in pharmacy, a graduate in medicine, or shall at the time of the passage of this act have had ten (10) years' practical experience in the preparation of physicians' prescriptions, and in compounding and vending medicines and poisons, or shall be a licentiate in pharmacy.

§ 3. Graduates of pharmacy and graduates of medicine, under the requirements of this act, must have had at least four years' experience in stores where prescriptions of

medical practitioners have been compounded, and have obtained a diploma from some legally constituted college of pharmacy or medicine. Pharmaceutists claiming the right of registration under this act on account of practical experience shall, within ninety days after its organization, show to the satisfaction of the Board of Pharmacy, to be created by this act, that they have had ten (10) years' practical experience in the preparation of physicians' prescriptions, and in compounding and vending medicines and poisons. Licentiates in pharmacy must have had four years' experience in stores where prescriptions of medical practitioners have been prepared, and shall have passed an examination before the Board of Pharmacy of the County of Kings, or before any other recognized board of pharmacy.

§ 4. The Board of Pharmacy of Kings County shall consist of five members, two of whom shall be pharmacists qualified for registration as aforesaid, to be elected by the Kings County Pharmaceutical Society, at a special meeting to be called for the purpose, within two weeks after the passage of this act: two practitioners of medicine to be elected by the Medical Society of the County of Kings, at its next stated monthly meeting after the passage of this act; and a pharmacist, who shall also be a secretary of the board, to be elected by the joint ballot of the members elected as herein provided for. The members of this board shall within thirty days after their election, as aforesaid, individually take and subscribe before the clerk of the County of Kings, an oath faithfully and impartially to discharge the duties prescribed for them by this act. They shall hold office for the term of three years, and until their successors are duly elected and qualified, and in case of vacancy it shall be filled in manner herein provided. The board shall organize for business by the election of a president to serve for the full term. The board shall meet at least once every three months, and three members shall constitute a quorum. The duties of the board shall be to examine and register pharmacists in the regular order of their application, to transact all business pertaining to the legal regulation of the practice of pharmacy in said county, and to examine into and adjudicate upon all cases of alleged abuse, fraud, malpractice or incompetence, and it shall be competent for the said board, by a vote of three-fifths of its members, to suspend or revoke the registration of any practicing pharmacist, after due notice and trial before said board. It shall be the duty of all persons, not exempt therefrom by the provisions of this act, to appear and apply for examination within ninety days after the organization of the board. And any person so applying shall furnish to the board satisfactory evidence that he has had at least four years' experience in the compounding of physicians' prescriptions and in the general duties of pharmacy, and shall pay to the secretary of the board a fee of five dollars. And should he pass such examination satisfactorily, he shall be furnished with a certificate as to his competency and qualifications, signed by the members of the Board of Pharmacy, which certificate shall be his warrant for registration. In case of failure to pass a satisfactory examination, he shall be granted a second examination without the payment of further fee.

§ 5. It shall be the duty of the secretary to keep a book of registration at some convenient place, of which due notice shall be given through the public press, in which shall be entered under the supervision of the Board the names and the places of business of all persons coming under the provisions of this act, and a statement to be signed by the person making the application of such facts in the case as he may claim to justify his application. The fee for registration of those in business for themselves shall not exceed two dollars, and for those in the employ of others shall not exceed one dollar. The secretary shall give receipts for all moneys received by him, and pay over the same to the treasurer of the Kings County Pharmaceutical Society, taking his receipt therefor, which moneys shall be used for the purposes of defraying the expenses of the Board of Pharmacy, and any surplus shall be for the benefit of said society. The salary of the secretary shall be fixed by the board, and shall be paid out of the fees for examination and registration.

§ 6. Every registered pharmacist from and after the first day of October, eighteen hundred and seventy-nine, shall be held responsible for the quality of all drugs, chemicals and medicines he may sell or dispense, with the exception of those sold in the original packages of the manufacturers, and also those known as "patent medicines," and should he knowingly, intentionally and fraudulently adulterate, or cause to be adulterated, such drugs, chemicals or medical preparations, he shall be deemed guilty of a misdemeanor, and upon conviction thereof be liable to a penalty not exceeding one hundred dollars, and in addition thereto his name shall be stricken from the register.

§ 7. It shall be unlawful for any person from and after the first day of October, eighteen hundred and seventy-nine, to retail any poisons enumerated in schedules A and B, as follows, to wit:

SCHEDULE A.

Arsenic and its preparations, corrosive sublimate, white precipitate, red precipitate, biniodide mercury, cyanide of potassium, hydrocyanic acid, strychnia, and all other poisonous vegetable alkaloids and their salts, essential oil, bitter almonds, opium and its preparations, except paregoric, and other preparations of opium containing less than two grains to the ounce.

SCHEDULE B.

Aconite, belladonna, colchicum conium, nux vomica, henbane savin, ergot, cottonroot, cantharides, creosote, digitalis and their pharmaceutical preparations, croton oil, chloroform, chloral hydrate, sulphate of zinc, mineral acids, carbolic acid and oxalic acid, without distinctly labeling the bottle, box, vessel or paper in which the said poison is contained, and also the outside wrapper or cover, with the name of the article, the word "poison," and the name and place of business of the seller; nor shall it be lawful for any person to sell or deliver any poison enumerated in said schedules A and B, unless upon due inquiry it be found that the purchaser is aware of its poisonous nature, and represents that it is to be used for a legitimate purpose. Nor shall it be lawful for any registered pharmacist to sell any poisons included in schedule A, before delivering the same to the purchaser, causing an entry to be made in a book kept for that purpose, stating the date of sale, the name and address of the purchaser, the name and quantity of the poison sold, the purpose for which it is represented by the purchaser to be required, and the name of the dispenser; such book to be always open for inspection by the proper authorities, and to be preserved for reference for at least five years. The provisions of this section shall not apply to the dispensing of poisons, in not unusual quantities or doses, upon the prescriptions of practitioners of medicine.

§ 8. Nothing contained in the foregoing sections shall apply to or interfere with the business of any practitioner of medicine who does not keep open-shop for the retailing of medicines and poisons; nor with the business of wholesale dealers, excepting section seven and the penalties for its violation.

§ 9. Any person who shall attempt to procure registration for himself, or for any other person under this act, by making or causing to be made any false representation, shall be deemed guilty of a misdemeanor, and shall upon conviction thereof be liable to a penalty not exceeding five hundred dollars. Any registered pharmacist who shall permit the compounding and dispensing of prescriptions of medical practitioners in his store or place of business by any person or persons not registered, except under the supervision of a registered pharmacist, or any person not registered who shall keep open-shop for the retailing or dispensing of medicine and poisons, or who shall fraudulently represent himself to be registered, or any registered pharmacist or dealer in medicines who shall fail to comply with the regulations and provisions of this act, in relation to retailing and dispensing of poisons, shall for every such offense be deemed guilty of a misdemeanor, and upon conviction thereof be liable to a penalty not exceeding five hundred dollars.

§ 10. All previous acts and parts of acts applying to the County of Kings, relating to the practice of pharmacy and the sale of poisons, and conflicting with the provisions of this act, are hereby repealed.

§ 11. It shall be the duty of the district attorney of the County of Kings, upon information of the Board of Pharmacy herein created, to prosecute any and all violations of this act.

§ 12. Each and every penalty recovered under this act shall be paid to the treasurer of the Kings County Pharmaceutical Society for the benefit of the society.

§ 13. This act shall take effect immediately.

Approved June 12th, 1879.

BROOKLYN PATHOLOGICAL SOCIETY.

Regular Meeting, Thursday, May 22d, 1879.

The Vice-President, Dr. A. Mathewson, in the chair.

ANEURISM OF THE SINUS OF VALSALUS—MOVABLE KIDNEYS.

Dr. B. F. Westbrook presented a specimen of an immense aneurismal sac involving the ascending portion of the arch of the aorta, and which had apparently originated in the right or posterior aortic sinus.

History.—A man, 28 years old; native of the United States. He was under the care of Dr. E. B. Jones. In August, 1877, accompanied by some other young men, he undertook, for a wager, to race up the steps at High Bridge (about 150 feet). He arrived first at the top, but fainted immediately. Blood issued from his mouth and nostrils. He soon revived, declared that he felt as well as ever, and the incident was forgotten. At the end of about six months he began to be troubled with dyspnœa, increased by the slightest exertion. He soon noticed a swelling of the face, particularly in the mornings on first arising. This rapidly increased, so that in a few days, when he presented himself to the doctor, the face and neck were swollen to such an extent that he was unable to wear his collar. The color was a dark red, and resembled more a venous congestion than an œdema. At the same time there was some tumefaction of the abdomen. Drs. Jones and W. examining the case at this time found the apex beat a little outside the nipple. The area of cardiac dullness was increased on the left side, and a small area of dullness was present on the right side of the sternum at the level of the second intercostal space. The cervical veins were distended. The heart's action was rapid and forcible, and a systolic bruit was heard, having its point of greatest intensity at the right edge of the sternum and second intercostal space, and propagated into the arteries above. After the patient had remained some time in the erect posture the swelling partially subsided, but upon his resuming a recumbent position it was again slowly produced. He was treated with veratrum viride, and large and increasing doses of the iodide of potassium. The swelling slowly diminished for about six weeks, when he removed to New York and passed out of Dr. Jones' care. In October, 1878, the doctor was summoned again hastily by a message saying that the patient was dying. He had had a violent fit of coughing, lasting five or six hours and accompanied by great dyspnœa. Five minims of Squibb's deodorized tincture of opium, with

fifteen of the tincture of cimicifuga, relieved him in a few moments. This dose was repeated as often as the cough returned, and was almost always efficacious. At this time the patient began to complain of acute neuralgic pains in the right sub-axillary region. These pains could only be relieved by the administration of opiates. The patient was again lost sight of until April, 1879. At that time he had the most severe and terrible neuralgic pain, mostly limited to the right side of the thorax and right arm. Fifteen minims of Magendie's Solution hypodermically relieved the pain.

Examination by Drs. Jones and Westbrook showed marked œdema of the lower extremities, pallor and cyanosis of the face, fullness in the supraclavicular spaces, with marked visible pulsation of the carotids and subclavians. The apex beat was in the seventh intercostal space, two inches outside the mammillary line. The area of cardiac dullness was correspondingly increased. There was complete dullness on the right side of the sternum, from the clavicle to the third intercostal space. The dullness on the left side, passing downward an inch from the edge of the sternum, began at the third rib, about. On palpation the cardiac impulse was found to be strong. Over the area of dullness on the right side a distinct thrill accompanied the systole of the ventricle. This could also be felt in the subclavian and axillary arteries of both sides, and in the carotids. The radial pulse was abrupt and jerking, as in aortic regurgitation. On auscultation a loud and rough systolic bruit was heard over the base of the heart, having its greatest intensity in the second and third intercostal spaces a little to the right of the sternum, and propagated upward into the great vessels. This was followed by a loud diastolic bruit, extending downward to the ensiform cartilage. The aortic second sound was not heard. No respiratory murmur could be heard in the region of the right apex; elsewhere it was obscured by large and small moist râles. He was suffering greatly from dyspnœa and constant cough. The voice was not affected, nor was any difference in the pupils observed. Palpation detected no difference in the radial pulses. No sphygmographic trace was obtained, as the patient died somewhat suddenly. Dr. J. prescribed rest in bed and the following: Take of strychnia, one-ninety-sixth of a grain; ext. ergot, fl., 10 minims; tr. digit., 5 minims; mix, three times a day, increasing the ergot 2 minims every day, till the maximum dose of 30 minims was reached. Under this treatment, with an occasional dose of morphia hypodermically, the pain entirely disappeared in a few days, the œdema diminished, and the general condition improved. On the 2d of May he had a sudden attack of orthopnœa, which was relieved by the hypodermic administration of 15 minims Magendie's Solution.

The following day he had two more seizures, each more prolonged and difficult to control than the preceding, and on the 4th another one, which terminated his life. He was comatose for about half an hour before death.

Autopsy, made the following day:

The *body* was muscular and had a fair amount of adipose tissue. The surface was blue and livid about the head, neck and back.

The *head* not examined.

The *heart* was greatly hypertrophied, both the left ventricle and the right heart being involved. The cavities were dilated, but the walls were thick and the muscle healthy. The mitral valve was unaffected. The aortic orifice was dilated so as to admit four fingers. An immense aneurismal sac as large as the heart involved the ascending portion of the arch up to, but not implicating, the innominate. It projected from the right and posterior aspects of the arch, and occupied the upper portion of the right pleural cavity, flattening the apex of the right lung, to which the sac was firmly adherent, owing to adhesion between the two pleural surfaces, the sac and the pericardium. By its extension downwards it exerted great pressure upon the right auricle, to which it had also become adherent. The aneurismal dilatation began immediately above the aortic orifice; the original form of the sinuses was entirely lost. The connective tissue of the upper mediastinal region was thickened and indurated.

The *lungs* showed congestion and œdema, with redness and tumefaction of the bronchial mucous membrane. The *bronchial* glands were somewhat enlarged.

Liver enlarged, congested and indurated (nutmeg liver).

Spleen in a similar condition.

The *kidneys* were swollen from congestion. The left kidney lay further forward and lower than normally, resting on the sides of the lumbar vertebræ. By the slightest pressure it could be made to descend as low as the anterior superior spinous process of the ilium, inwards and downwards so that half of its mass projected over the promontory of the sacrum, or directly inwards entirely across the vertebral column, so that it rested on the right side of the bodies of the lumbar vertebræ. The right kidney was also movable, but not to so great an extent. It descended as low as the crest of the ilium, and could be made to lie on the anterior surface of the bodies of the vertebræ. The free mobility of the kidneys appeared to be due to their being invested with no fatty capsule whatever, and to the connective tissue being of a very loose character. The supra-renal capsules moved somewhat, but not to such an extent as the kidneys, the connective tissue between them being very

loose. No undue pressure was employed to produce the displacement. Gravity acting in the erect posture would have been sufficient to produce it during life. Each kidney was provided with one artery, which was not of unusual length. No symptom indicating the mobility of the kidneys had been observed during life.

The points of interest attaching to this case were, first, The fact that its history could be traced from its inception to the final termination, a thing usually very difficult in aneurisms of the thoracic aorta. There could be little doubt that the violent distension brought about by greatly increased cardiac action, combined with forcible contraction of all the voluntary muscles, had started the vessel on the day when he foolishly raced up the steps at High Bridge. Secondly, it was another illustration of the enormous size to which aneurisms of the arch sometimes attain without producing any protrusion of the chest wall. And, thirdly, it adds another to the many cases in which death resulted, not from rupture of the aneurism, but from its pressure upon the surrounding viscera, and the coincident valvular disease.

MAMMARY TUMOR.

Dr. Archibald Campbell presented a tumor of the breast, removed by him, September 25th, 1878, from an English woman 61 years old. It first made its appearance four years ago. The patient, a widow lady, could assign no cause for it. There was no hereditary diathesis. For thirty-two months it grew very slowly, and then very rapidly during the succeeding six months. During the latter period she suffered frequently from lancinating pains. Its removal was decided upon; but her courage failed at the last moment, and it was allowed to remain ten months longer, at the end of which time she came to the Helping Hand Dispensary, saying that it had not increased much during the ten preceding months, that she occasionally had pain in it, and thought she had lost considerably both in flesh and strength. The tumor was situated on the external edge of the left mamma. It was not adherent to the pectoral muscle, but there was a ledge of indurated tissue extending from it across the base of the gland. One small indurated lymph gland, of the size of a bean, was found in the axilla, near the tumor. The tumor and nipple were included in an elliptical incision, and the entire breast with the tumor was removed by enucleation with the fingers and handle of the scalpel. There was very little hemorrhage. The five or six vessels met with were occluded by torsion. The wound was closed with silk sutures, reinforced by adhesive strips, and covered by compress of oakum and roller bandage. After four days the dressings were removed and the wound found to be united in two-thirds of its extent by first intention. There were only one or two drachms of serous

discharge form the whole tract. Within ten days the wound had entirely closed. The anæsthetic used was ether.*

(The history of some interesting intestinal concretions, presented by Dr. Rand, will be given in a subsequent report when they have been examined by the Committee on Microscopy.)

Regular Meeting, June 12th, 1879.

The President, Dr. F. W. Rockwell, in the chair.

EPITHELIOMA OF THE LIP.

Dr. Rockwell presented a specimen, with history as follows:

E. H., a colored porter, 33 years old; single. About a month ago he discovered a hard pimple on the inner right border of the lower lip. This disappeared in about a week, and was followed by another on the left side in the same situation. Thinking it contained blood, he punctured the second tumor with a needle. It bled profusely, and in a few days had increased to such a size that he became alarmed. I found a bright red growth with granular surface, bleeding at a touch. No crust upon its surface, no discharge, no loss of substance at the base, no induration of surrounding tissue or of adjacent glands. Zinc ointment was applied for a day or two. He complained that this produced pain in the growth. Collodion was then applied, with somewhat better effect, and an apparent decrease in size. A friend advised the patient to apply lunar caustic, which he did with such good effect that in two days after the application the tumor had nearly doubled in size and was severely painful. It was removed, May 30th, by a V incision, the apex ending at the vermilion border, and the substance removed coming from the mucous surface entirely. Sutures cut long, brought out of the mouth and fastened to the cheek. It healed by first intention, and the sutures were removed on the third day.

Dr. Rockwell asked the opinion of the Society as to the possibility of a few weeks' irritation converting an entirely benign process into a malignant growth.

Dr. Gray had seen, among other causes of irritation, a number of cases of eczema of the lip, but had never seen it result in malignant disease. On looking up the subject he had not been able to find a single case where an epithelioma had developed in that way. This illustrates the great difference between a person predisposed to the development of malignant disease and one who has no such predisposition.

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* Microscopical examination of the growth shows it to be scirrhous cancer.—*Mic. Comm.*

Dr. A. Otterson: Epitheliomas frequently take on a more rapid growth after irritation. Old smokers, when epithelioma first appears on the lip, frequently put the oil from the pipe on sore, in the belief that it has healing properties. The growths often develop very rapidly after this irritation. He had seen a similar result from the irritation of other cancerous growths, and instanced a case in which, after the growth had been incised by a practitioner, who mistook its gelatinous elasticity for fluctuation, it became everted and the rapidity of its growth greatly increased.

It was remarked that the question of Dr. Rockwell could not be definitely answered until the problem of the etiology of tumors was solved. If the theory recently advanced by Cohnheim was true, irritation of itself was insufficient to cause a malignant growth. Cohnheim regarded all tumors as originating in a misplacement or error in the arrangement of the embryonic cells of the blastodermic membranes, the subsequent growth of these cells being of an atypical character. Cohnheim had called attention to the very frequent development of tumors in situations which were little subject to irritation, and the reverse.

CYSTIC TUMOR OF BREAST.

Dr. Rockwell presented a small cystic tumor of the breast, removed by him from a widow lady, æt. 48. The patient has borne one child. Suspicious family history; tubercular diathesis. Has been in fair health till the last six months. About a year ago, having just passed the menopause, she noticed a small tumor upon the upper and outer border of the left breast, about the size of an almond, superficial and painless. An exploring needle withdrew about a drachm of greenish and slightly viscid serum, containing epithelial scales and fatty granules. No glandular enlargement. Injection with iodine was advised, but neglected by the patient on account of the slight annoyance caused by the growth. After six months there was a little pain and tenderness in the gland and left arm. The breast seemed somewhat large and firmer. Removal was advised. During the next four months the tenderness increased somewhat and there were lancinating pains.

She returned again in May, and on the 29th it was removed at St. John's Hospital, with the assistance of Drs. Catlin and Freeman. The gland was entirely removed, as it was thickened. The wound was thoroughly washed with a thymol solution, and rapidly closed with horsehair sutures, a drainage-tube being introduced at its most dependent angle. Two folds of patent lint soaked in carbolized oil (1-20) were laid over the incision, several folds of sheet wadding over this, and a piece of rubber sheeting bound snugly over all. The following day the

patient was comfortable. On the second day the dressings were soaked with a sero-sanguinolent discharge.

At its first appearance the nurse applied a pledget of borated lint. The portion of the dressings in contact with the drainage-tube were now rapidly removed and re-applied, the tube being withdrawn about one inch. On the third day the dressings were re-applied. Tube removed. No discharge. Union by first intention. On the fifth day the hole left by the tube had closed. On the seventh day the sutures were removed and a simple dressing of cotton applied.

The breast was thickened, indurated, and contained a number of cysts with serous fluid in them. The walls of the first cyst were thickened. (Referred to the Microscopical Committee.)

REPEATED ABORTIONS.

Dr. Read presented an ovum of about four weeks' growth. The mother had miscarried four times and borne two children at six months. There is one living child, five years old. Some time ago a polyp was removed from the uterus and the cavity curetted. Since then she had borne one child at six months and the specimen presented. The abortion had been produced through fright. The husband had syphilis before marriage, but has no symptom of it now. In answer to questions it was stated that the mother had had no sign of primary or secondary syphilis, though the doctor thought it possible that the mother might be infected through the fœtus in utero. In reply to questions from Dr. Jewett, he stated that he had seen five or six cases where infection of the mother had evidently occurred in this way, and mentioned a case the history of which he had read some years ago at the County Society. He also referred to the views of Mr. Jonathan Hutchison.

The Curator would be pleased to receive correspondence in regard to the exchange of microscopical slides. Address: Dr. E. S. Bunker, No. 280 Henry Street, Brooklyn.

☞ *The Secretary requests members presenting specimens to present therewith a written account of the history and pathological appearances.*

BENJ. F. WESTBROOK, *Secretary.*

Ἀσκληπιὸς ὁ Σωτὴρ

Χαρμα μέγ' ανθρωποισι, κακων θελκτῆρ' οδυναων.

Hymns of Homer, No. XVI.

PROLIFERATIONS.

——YELLOW FEVER FUND.—The following letter has been received:

Memphis, Tenn., June 8th, 1879.

DR. ALEX. HUTCHINS.

DEAR DOCTOR: Below you will find a statement of the manner in which the relief fund, sent by your generous people for the benefit of widows and orphans of physicians, has been distributed. You would have had this report some time since, but I have delayed it so as to make a final report to the Shelby Co. Med. Society before reporting to you. I have reported from time to time to this body, and have conferred with it, and especially the President, Dr. R. W. Mitchell, and taken their advice as to the distribution of this and other funds sent for a like purpose. I have endeavored to put these funds where they would do most good. I, in common with Dr. Mitchell and others, thought it wisest to distribute by installments and not all at one time, owing chiefly to the fact that the beneficiaries are poor financiers, and likely to use the money more economically if received in small installments. Before closing, allow me again, through you, and in the name of those you have aided, to thank our profession in Kings Co. for their generosity, and to say that through them and their confreres in New York there has been no suffering for necessaries among the families of Memphis physicians who lost their lives in the yellow fever epidemic of 1878; and, moreover, I have still on hand money enough to see that none of them will suffer for several months yet to come. If you had seen the evidences of gratitude and appreciation which I have, both verbally and in writing, your committee would not regret the noble work you have done.

With warm feelings personally, and hoping that I will have the pleasure of meeting you this fall (about which time I hope to visit New York), I am

Very truly your friend,

HEBER JONES.

——SUBSCRIPTIONS TO VOL. IV.—In response to the circular issued since the May No., the following subscriptions have been received: G. W. Baker, P. Candidus, W. C. Conroy, A. W. Catlin, A. S. Clarke, J. B. Colgan, E. N. Chapman, J. T. Conkling, D. A. Dodge, A. J. Dower, G. A. Evans, G. R. Fowler, H. Fearn, T. J. Ferris, W. Gilfillan, H. J. Garrigues, S. C. Griggs, S. Hendrickson, W. H. Harlin, R. Hesse, G. G. Hopkins, T. M. Ingraham, J. J. Kunz, J. Krauter, H. Loewenstein, C. R. McClellan, W. Maddren, C. Olcott, W. H. Peer, L. S. Pilcher, J. S. Prout, J. D. Rushmore, C. A. P. Szigethy, J. C. Shaw, W. Swift, J.

Stewart, W. Smith, J. D. Sullivan, E. R. Squibb, W. H. Thayer, J. S. Thorne, J. Vanderveer, J. S. Wight, E. A. Whaley, H. B. White, H. F. Williams.

Additional subscriptions will be acknowledged in succeeding numbers of THE PROCEEDINGS.

——THE COMING CENSUS will be made more complete in respect of vital statistics than any previous one. The Superintendent mails to all the physicians of the country blanks for the registration of all deaths for the year ending May 31st, 1880, their causes, date, age, etc. He sends out a 24-page book of blanks; these, when filled, will be replaced by others. Physicians not receiving the blanks should not fail to communicate with Gen. Francis A. Walker, Washington. This work, like so much else that physicians are called upon to do for the good of the general public, is expected as a matter-of-course, and without remuneration. It is none the less worthy of their best attention, and we trust that no one who sees these lines will withhold his co-operation. In respect of one matter, we will add this suggestion—that the age of the decedent be always as fully and exactly as possible. Every communicated fact is to be regarded as strictly confidential. It will be curious and instructive one year hence to note what proportion of the Brooklyn deaths, every one of which is believed to be registered at the Board of Health under the operation of the permit-system, have also been returned voluntarily, by the medical profession here, to the Bureau of the Census. Dr. Billings, of the army, whose name is esteemed far and wide, is the medical consultant to that Bureau in matters pertaining to these vital inquiries.

——THE N. Y. STATE SOCIETY has published for distribution Dr. A. Hutchins' Report to the last session on the codification of the By-laws of that Society; also the paper of Dr. Sturgis on the abuses of free medical services. Copies of these papers may be had at the rooms of this Society.

——TRANSACTIONS of the American Gynecological Society, Vol. III, for the year 1878. Boston: Hurd & Houghton. The Riverside Press, Cambridge, 1879. This is a sumptuous volume, well worthy of the hard-working specialty in whose interest it is produced.

——THE MEDICAL REGISTER for 1879–80 is out early this year, delivery to subscribers having been made June 10th. The Brooklyn portion of the book is improved by the addition of a Street-list. The editor, Dr. W. T. White, has done his work well, and has produced a volume that will not suffer by comparison with any preceding issue. Any one who may discover errors in the book, or who may desire to

subscribe, should communicate with the editor, 130 East Thirtieth Street, New York City. The price to those who have not already subscribed is $2.50.

——Dr. Henry S. Downs died at 100 Sixteenth Street, on May 2d, aged 67 years. He was formerly a well-known physician of New York City, at 123 Bleecker Street. He graduaded in 1834 from the College of Physicians and Surgeons, was a member of the Academy of Medicine and numerous other Societies. His death resulted from cancer of the rectum, and his remains were conveyed to Sharon, Conn., for interment.

——Dr. Marcus Berg died at 162 Norman Avenue, May 3d, aged 78 years, from an attack of bronchitis, lasting five days. He was a native of Germany, and had been 28 years in this country, six years in the city.

——Dr. John B. Overton died May 25th at 210 South Fourth Street, E. D., aged 51 years, from valvular disease of the heart. He was a native of New York, and had lived twenty years in this city.

——Dr. Darius G. Farwell died May 5th at 148 Livingston Street, at the age of 48 years. He had been a resident of Brooklyn about fifteen years, and during the greater part of that period had pursued the business of pharmacist.

——A Rare Clergyman.—The following note was received from a Brooklyn clergyman by a Brooklyn physician:

27th January, 1879.

My Dear Doctor: I never in my life called a doctor up at night and troubled him for regular attendance in a difficult case without paying something. It is a point of pride with me, and a matter of feeling. When I want a doctor, I *want* him, night or day, and I don't feel free to call at any hour if I am entirely dead-headed. You must, therefore, for the sake of my self-respect, add to all your other kindness the acceptance of this check, which is not at all adequate to pay for your service, but which you will accept *on account*, with our hearty thanks for your goodness, and our sincere appreciation of your skill. Very truly yours,

——— ————————.

——The Committee on Metric System reported the following, which was received and action deferred:

Whereas, The adoption of the International Metric System of Weights and Measures would greatly simplify calculation in all branches of science, and enable physicians and scientists of all nations to work in harmony with each other; therefore,

Resolved, That this Society requests all members to use the Metric System in their papers to be hereafter presented to this Society.

Resolved, That it is the sense of this Society that the Metric System should be the only one taught in our colleges and employed by practitioners.

Resolved, That this Society will gladly co-operate in proper measures to cause the Metric System to be more easily adopted by physicians generally.

——Fracture of the Femur in a New-Born Child.—Dr. G. A. Ostrander reports the following case: Mrs. W., æt. 30, on May 16th, after a very rapid labor, gave birth to a male child, which was suddenly expelled with the natural rupture of the membranes. The child was fretful, and when two weeks old the doctor's attention was called to a swelling on the left thigh. After one day's poulticing it was lanced, the discharge being a large quantity of laudable pus, followed by broken-down, stinking matter. It was then seen that there was a transverse fracture at the middle third, and a separation of the shaft of the tibia from the head at the epiphysis. The whole limb was encased in pasteboard and leather splints, with evident comfort to the child; but within 24 hours it died from exhaustion. An interesting account of Spontaneous Fracture of the Long Bones of an Infant is given in the *National Medical Review* for May, 1879.

——The New Drug Law.—In accordance with the provisions of this Act Drs. A. Haslett and J. D. Rushmore were elected to represent the Medical Society and Messrs. G. M. Baker and G. A. Newman to represent the Pharmaceutical Society of the County of Kings.

——Opium Inebriety.—The attention of our readers interested in this subject is invited to third page of cover.

——Archibald Billings says, in his "First Principles of Medicine" (second American, from fifth London Edition, Philadelphia: Lea & Blanchard, 1851), that "the term tonic is applicable to all those medicines which cure chronic inflammation without being either stimulant, or directly sedative or depletory. Mercury has often been called a stimulant, and yet it cures inflammation when all stimulants are carefully withheld, and so coincides with the sedatives, and might as justly be called a sedative. But it also cures inflammation in debilitated habits, when wine and other stimulants are necessarily administered. I therefore consider mercury neither stimulant nor sedative, but tonic; that is, by its specific action on the capillaries it causes them to contract."—P. 91. "All the metallic salts have, more or less, an astringent effect on the capillaries."—P. 92. The book contains much useful information and deserves study.

——The Regular Monthly Meetings of the Medical Society of the County of Kings are held at 8 P. M., on the third Tuesday of each month, at Everett Hall, 398 Fulton Street.

The July meeting will be held on the 15th, at which there will be presented the following papers:

Eucalyptus in Albuminuria and Iodine in Malarial Fevers. Dr. W. Anderson.

Trichinosis. Dr. W. Maddren.

——New Members.—At the June Meeting the following new members were elected: A. Wheelus, M.D., N. Y. Univ., 1858; Jas. S. King, M.D., L. I. C. H., 1877; L. B. Irish, M.D., Bell. H. M. C., 1862; J. S. Perry, M.D., Coll. P. & S. N. Y., 1877; W. B. Hewitt, M.D., Coll. P. & S. N. Y., 1877; H. H. Pillsbury, M.D., Harvard Univ., 1859.

The following were proposed for membership: Dr. Theo. A. Van Duzee, 291 South First Street, E. D.; Dr. Joseph Creamer, 60 South Second Street, E. D.; Dr. Geo. W. Newman, 183 Lorimer Street, E. D.; C. A. Limeburner, 152 Gates Avenue.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

OFFICERS AND COMMITTEES FOR 1879.

President.....J. S. Prout, M.D., 167 Clinton St.
Vice-President.....C. Jewett, M.D., 310 Gates Ave.
Secretary.....R. M. Wyckoff, M.D., 532 Clinton Ave.
Assistant Secretary.....J. H. Hunt, M.D., 419 Hart St.
Treasurer.....J. R. Vanderveer, M.D., 301 Carlton Ave.
Librarian.....T. R. French, M.D., 72 Greene Ave.

CENSORS.

F. W. Rockwell, M.D. (Senior Censor), 6 Lafayette Ave.
G. W. Baker, M. D.,48 Bedford Ave., E. D. B. A. Segur, M.D., 281 Henry St.
A. Hutchins, M.D., 796 De Kalb Ave. L. S. Pilcher, M.D., 4 Monroe St.

DELEGATES TO THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

(1878 to 1882.)

Drs. J. C. Shaw,	Drs. A. J. C. Skene,	Drs. E. N. Chapman,
J. D. Rushmore,	G. G. Hopkins,	J. S. Prout,
R. M. Wyckoff,	A. Mathewson,	F. W. Rockwell.

Chap. XI, Art. 2, of By-laws: "Any Member elected as Delegate to the Medical Society of the State of New York, who shall be unable to act as Delegate during two successive years, shall be considered to have vacated his position as Delegate."

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION.

Drs. Andrews,	Drs. French,	Drs. Pilcher,
Bodkin,	Garrigues,	Schapps,
F. H. Colton,	Hawley,	Shaw,
Dodge,	Hutchison,	Sherwell,
Fessenden,	Mathewson,	Westbrook.

COMMITTEES OF THE SOCIETY.

HYGIENE.

Drs. T. P. Corbally, J. Walker, W. E. Griffiths, B. Edson, A. W. Ford.

REGISTRATION.

Drs. R. W. Wyckoff,	Drs. W. G. Russell,	Drs. R. M. Buell,
W. E. Griffiths,	N. Matson,	A. S. Clarke,
J. A. Jenkins,	F. W. Rockwell.	

PUBLIC INSTRUCTION.

Drs. A. J. C. Skene, C. L. Mitchell, E. R. Squibb, J. T. Conkling, J. C. Hutchison.

PHYSICIANS' MUTUAL AID ASSOCIATION.

Drs. B. A. Segur, W. W. Reese, J. H. H. Burge, A. Hutchins, W. G. Russell.

PROCEEDINGS

OF THE

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

STATED MEETING, JULY 15, 1879.

IODINE IN MALARIAL FEVERS.

BY WM. ANDERSON, L. R. C. P. AND S., EDIN.

About five years ago, while acting as physician to the Southern Dispensary of this city, I had many cases of intermittent or malarial fever to treat, where the patients were too poor to purchase the quinia prescriptions I then considered essential for their cure; and as the managers did not then supply such expensive drugs, many patients were doubtless left to Nature or had recourse to some patent nostrum. This led me to look around for some substitute for quinia that would be cheap as well as safe and efficient. Arsenic we had on our shelves, but I did not consider it very safe for the class of patients we had to deal with; besides, though occasionally beneficial, it is by no means an efficient substitute for quinia.

At this time I came across a statement, on whose authority I cannot recall, affirming that iodine was a reliable remedy in intermittent fevers. As our stock included the simple tincture of iodine, I resolved to give this drug a fair trial, and accordingly prescribed it to a number of patients having the symptoms of intermittent fever. After carefully watching the results, I was thoroughly convinced that I had found what I wanted; and from that day to this I have, with very few exceptions, invariably prescribed iodine in cases of intermittent fever, both in private and in dispensary practice. Up to the present time I have treated at least

300 cases in this manner, and with almost invariable success. To specify individual cases in an irregular disease such as this, would be of little use. The diagnosis is not usually difficult, so that there is no great room for error on that score. The patients were chiefly residents in that part of Brooklyn known as Gowanus, where this disease is somewhat prevalent, though generally in a mild form. But there were enough cases of a severe type to put the treatment thoroughly to the test. As there were no changes in the diet or other hygienic conditions of the patients, there was little room left for doubt that the iodine and the rapid improvement stood in the relation of cause and effect.

The time required to effect a cure naturally varied. In a large number there was no paroxysm after the first dose; frequently it took two or three days before any mitigation was observed. While it was seldom necessary to repeat the usual two or three ounce mixture, it occasionally happened that the fever returned when the medicine was omitted for a few days, but was again promptly subdued on a renewal of the iodine. That there is such a thing as a permanent cure for this subtle and Protean disease, even with iodine, I very much doubt; and no educated physician would promise it under any form of treatment. As to the question of relapse, I believe there is less chance of a return than after treatment by quinia. I have had several patients return the following year for their iodine prescription, which they remembered as having given them prompt relief; but this experience is doubtless common to all forms of treatment.

Iodine is so seldom prescribed for internal use in any form of disease, and it is so customary to consider it as an external agent, that most physicians look with suspicion on the idea of substituting it for quinia. Very many think the stomach would not tolerate it. This idea, however, is merely the result of inexperience. The extent to which Lugol carried the exhibition of iodine, ought to be sufficient proof of its safety, if not of its usefulness. In the dose recommended, and properly diluted, it is quite palatable, and can be borne by almost every one. I have had but one patient who could not retain it, but neither could she retain a solution of quinia, and was only relieved when I prescribed quinia in capsules. Children take it readily—that is, where they will take anything readily. I have given it to children of all ages, and have not had a fraction of the trouble I formerly experienced with quinia.

When I commenced this line of treatment I used the simple tincture of iodine in syrup and water; but while this acted well therapeutically, it was found advisable to add iodide of potassium to the mixture, to prevent precipitation of the iodine. For adults I usually prescribed twelve to fifteen minims of the compound tincture, freely diluted, to be taken

three times a day, after food, and regardless of pyrexia. From five to ten minims usually sufficed for children. Larger doses were frequently employed in severe cases, without producing any unpleasant results. My usual prescription in private practice is as follows: Take of tincture of iodine comp., 6 drachms; syrup of acacia, 18 drachms. Mix. Dose, teaspoonful in wineglassful of water three times a day, after food.

The compound solution of iodine would answer equally well, and would come cheaper for dispensaries, or those physicians who give out their own medicine. The iodine may be combined with any other drug indicated, and I now frequently use elixir of eucalyptus as a vehicle; but I was careful for a long time to use no combinations that might complicate the experiment.

As yet I have failed to observe any injurious effects from the internal use of iodine, even where it has been continued for many weeks. I had two patients—canal-boat captains—who had symptoms of chronic malarial trouble of several years' duration, and who had doubtless been saturated with quinia by the numerous physicians they had consulted, without any good result. I put them on iodine, and they improved so much and were so afraid of relapse that they kept taking the mixture over three months. One of them gained considerably in weight during treatment. The symptoms designated iodism I have not observed, though they may have occurred without being reported to me.

Why iodine acts so beneficially in malarial fevers must remain a speculative question till we know something more definite of the disease itself. The drugs usually employed in this disease have marked antiseptic properties, and this is a prominent trait in iodine. Its special stimulant action on the entire glandular system is generally accepted, and it has long been employed to reduce enlarged spleen—so common a feature in malarial disease. Its high diffusive power causes it to enter the circulation very rapidly, and it is as quickly eliminated in the secretions.

I have induced several members of this Society to give iodine a trial in malarial disorders, and have heard nothing but favorable results. Dr. J. E. Gregory informs me that one of his patients, a lady, had suffered for a lengthened period with malarial fever, and had purchased an ounce bottle of sulphate of quinia, and supped it in teaspoonful doses till her ears rang, but without producing any effect on the fever. He then ordered fifteen minim doses compound tincture of iodine, three times a day, and there was no return of the fever after the first dose, nor had there been any relapse several months afterward. Many similar cases I have heard of, and several I have myself treated. On the other hand, there are doubtless cases where iodine will fail, and in which quinia will

succeed. One such I had a few weeks ago, in the person of a young lady who had a severe chill, followed by fever, and accompanied by most violent vomiting, every alternate day. I kept her on iodine for a week, without mitigating the disease in the slightest. Eighteen grains sulphate of quinia several hours before the attack had scarcely any effect; but fifteen grains sulphate of cinchonidia banished the trouble entirely. This, to me, was that exception which is said to prove the rule.

To enter into the history and literature of this subject I have neither opportunity nor inclination. Like most things that are true, it is not new. It seems to have been known that iodine possessed power over malarial troubles very many years ago; but that knowledge was confined to a very few, evidently, and not appreciated as it ought to be. Recently several physicians have recorded their experience in the journals, a few quotations from which may be useful.

Dr. J. W. Wadsworth, of Saltillo, Mexico, in the *New York Medical Journal* for May, 1879, states that he has tried the iodine treatment for four years, and in epidemics of great violence. He had fewer relapses than with quinia. Ten to fifteen minims of the compound tincture, combined with arsenic, was his usual prescription, preceded by a single dose of about twelve grains quinia. In 260 recorded cases the paroxysm was always arrested within twenty-four hours; and the twelve doses, lasting four days, were sufficient to guarantee a cure. Out of this number he had eight relapses, six being on the fourteenth day, one on the twenty-first, and one on the seventh. In not a single instance, though under the most miserable hygienic surroundings, did there occur a failure to effect an immediate cure when the medicine was taken as directed. Quinia and arsenic had often failed him, but iodine never.

Dr. Fordyce Grinnell, physician to the Wichita Agency, Indian Territory, writes to the *American Practitioner* that he had tried iodine in 147 cases, of all ages, with results equal to those treated with sulphate of quinia.

Dr. E. D. Laughlin, of Orleans (*Cincinnati Lancet and Clinic*), has, since 1875, used iodine in chronic ague with the most happy results, and also with good effect in typho-malarial fevers, combined with other remedies. He prefers Lugol's solution to the tincture, giving ten to twelve drops thrice daily in ague, and five to eight drops every six hours in fever, without regard to pyrexia. Its influence in reducing enlargement of the spleen is very decided.

In another number of the same journal, Dr. J. N. Schell, of Frankton, Ind., says he has used iodine in forty cases of quotidian and tertian types, and has had as good results as with quinia. Some cases of quotidian ague were arrested at once, while two cases were not at all affected.

Dr. J. B. Day, of Evansville, Ind., writes to the *Lancet and Clinic* that during a scarcity of quinia, twenty to thirty years ago, he commenced the use of iodine as a substitute in cases of chronic intermittent fever, and has continued since to do so. He first employed it to reduce enlarged spleens, and then as an adjuvant in the treatment of chronic intermittents. Scarcely any case, he thinks, even under poor hygienic surroundings, will withstand a persistent course for several weeks of iodine and iron. He never gives iodine in the acute form of the disease.

To the American physician, and indeed to the inhabitants of all countries cursed by malarial fevers, it seems to me that this is a subject of unusual importance. It would be a national blessing to have an effective, safe and cheap substitute for quinia. It would be a fit question for a national board of health to consider the utility of the vaunted Eucalyptus tree as a prophylactic ; and if it were found that the planting of this tree greatly reduced the amount of malaria, and that we had a cheap and effective remedy in iodine, we might rescue whole tracts of land now unfit for habitation.

I would also urge the profession to give iodine a fair trial, that they may partially free themselves from the fashionable bondage to the veritable Briareus of drugs—quinia. While there can be no doubt of the great usefulness of quinia, especially in malarial affections, there are many patients who cannot tolerate it, many on whom it has no good effect, and its high price is a drawback to all. It was said of some physician that he prescribed cod-liver oil internally, externally and eternally : this would be true of a vast number, by substituting quinia for the oil. In fact, there is such an epidemic of cinchomania amongst our physicians, that all other drugs run the risk of being forgotten.

I am glad to know that since this paper was announced (though probably not in consequence of said announcement) the Government have wisely withdrawn the iniquitous tax on quinia ; but though this fact may modify the argument from a money point of view, the price will still be high enough to make a cheap substitute desirable.

DISCUSSION.

Dr. J. D. Rushmore: In fourteen cases in hospital practice he had used iodine; also in the case of a medical student who had long suffered from the effects of malaria. The hospital patients were nearly all sailors, several of them from Panama and other decidedly malarial ports. In two cases the compound tincture of iodine was employed, the effects being to break up the attack with the first dose. In the other cases the first dose having failed, Dr. R. resorted to quinine. Amyl nitrite was used in two cases without good results. Warburg's tincture effected a

cure in one obstinate case. Dr. R. is of the opinion that the internal use of iodine may and should be extended. It is perfectly well borne, and has a general tonic action. His experience justifies a further trial of the remedy.

Dr. Skene had kept no accurate account of his iodine cases. They were among children mostly. The remedy should be given after meals; it is then better borne, from the fact, probably, that it unites with starchy foods in the form of an iodide of starch. His friend, Dr. Hall, of Vicksburg, informs him that this remedy agrees much better with irritable stomachs, and with children generally, than quinine.

Dr. Fearn had had no experience with the remedy, but thought it well worthy of a thorough testing. The trial should not stop short with a single dose, if the chill happens not to be broken by it.

Dr. Harcourt complimented the author upon his paper, and thought it worthy of attention, as introducing a good and cheap substitute for what has always been an expensive remedy, quinine. It is not a little interesting that two such apparently dissimilar remedies as iodine and quinine should have effected similar results. Quinine possibly effects a cure by the fact that it supplies the want, in the system, of that substance closely resembling quinine, and which may be called "human quinine"—described by recent physiological investigators. Iodine cannot be supposed to act in this manner. It seems more probable that the antiseptic action of the drug, alluded to by the author, is that by which malaria is antidoted.

Dr. Anderson: The dosage of iodine has yet to be made out. We begin with ten drops and find that certain cases yield under. But other cases may require and may bear kindly two, three or four times that quantity. All this has to be tested. In reply to a question, if any intensely malarial cases, as, for example, congestive chills, have been relieved by iodine, Dr. A. replied that his experience had not included that class of cases; but there was considerable testimony from physicians in certain intensely malarious districts in the Western part of this country, to the effect that it was a suitable remedy in very severe cases.

TRICHINOSIS.

BY WM. MADDREN, M.D.

The Trichina Spiralis was discovered by Paget and named by Owen in 1833. Trichinosis, as the disease caused by trichinæ, was first established by Zenker, in 1860, since which time the subject has been treated at length by many writers. The purpose of this paper is to present a brief history of five cases of trichinosis, occurring in this city last February, with a few of the recently ascertained facts in regard to trichinæ and trichinosis.

CASE I.—Mrs. G., German, aged 27. On January 31st and February 1st did not feel well; had some pain in upper part of abdomen and in back.

February 2d.—About eight o'clock in the evening was attacked with colic or cramp; pains in abdomen.

February 3d.—When first called this P. M. found patient suffering from very severe pain in abdomen, greatest in region of stomach, extending through towards back; violent vomiting, increased by any attempt to take drink or nourishment; severe frontal headache; pulse, 150-60; tongue and fauces clean and moist; surface of body moist, extremities cold; no stool for forty-eight hours. Gave stimulants, ice, sulphate of morphia and quinia; applied hot, moist flannel sprinkled with spirits of turpentine over abdomen.

February 4th.—Pulse, 160; had not slept; violent vomiting continued; had upon face, neck and upper extremities an eruption resembling measles, with here and there urticaria or petechial spots; no stool. Ordered Seidlitz powder every four hours, until one or more free movements.

February 5th and 6th.—Pulse, 144; colic pains recur less frequently, but are accompanied by cramping of fingers, toes, and muscles of nose, mouth and forehead. Upon questioning closely in regard to food taken the preceding week, I learned that on January 29th the servant had purchased, from one of our best pork-dealers, half a smoked ham, weighing four and three-quarters pounds. The meat was *particularly* fine in appearance, odor and flavor. A portion of the ham was cut into thin slices, and eaten raw by Mr. G. at the evening meal. The following evening (January 30th) the whole family (consisting of husband, wife, wife's mother, two children and servant) ate more or less heartily of the raw ham. On

February 1st or 2d a small remaining portion was eaten. This history, the symptoms of severe gastro-intestinal irritation or poisoning in the wife, together with the fact that the husband, mother, servant and one of the children were suffering, only less in degree, and excluding typhoid fever and intentional poisoning, led me to the diagnosis of trichinosis. Patient refusing to take castor oil continued Seidlitz powder every four hours.

February 7th.—Pulse, 124; two fluid stools, greenish in color, first movement since February 1st, notwithstanding having taken from four to seven Seidlitz powders a day for last three days. Dr. A. J. C. Skene, in consultation, confirmed diagnosis.

February 8th.—Pulse, 106; temperature, 99½°; four fluid stools; cramping of muscles, etc., ceased; face slightly œdematous about eyes, conjunctiva injected.

February 9th.—Pulse, 117; temperature, 102¼°. Urine, sp. gr. 1010, no albumen, casts or sugar; muscles of whole body lame, tired, sore and painful to touch, movement increases pain, etc.; hoarseness great, talks in whispers.

February 10th.—Pulse, 103; temperature, 100⅜°; respiration, 24. One fluid stool; tongue coated, moist; much viscid mucus or "slime" in mouth and throat; hoarseness continuous, with a feeling of obstruction in larynx; formication in face and extremities; œdema in orbital region greater.

February 11th.—Pulse, 109; temperature, 102½°. Sweat profusely during night; headache and occasional pain in bowels.

February 12th and 13th.—Pulse, 100–10; temperature, 99½°. Face swollen; headache severe; upon abdomen and chest eruption resembling measles.

February 14th to March 18th.—Pulse has ranged from 88 to 108; temperature from 97⅝° to 99¼° F. From two to five fluid greenish stools each day. At times severe pain over site of colon and rectum. A considerable amount of opium administered to relieve pain or check diarrhœa; seemed to add to distress, and cause temperature to rise and pulse to become more frequent.

Slight œdema of face and extremities; feet and legs to knees often cold and moist with perspiration; difficulty of respiration, speech and in eating, frequent and distressing. Much lancinating pain at times in both upper and lower extremities; pain in intercostal and pectoral muscles. Urine negative.

March 18th to 30th.—Pain and slight œdema over course of femoral vessels in left thigh. Appetite very great. From two to four lightish yellow fluid stools each day. Feet became œdematous if patient allowed to sit up.

Early in April patient removed to New York City; convalescence was very slow.

Case II.—Mrs. H., German, aged 63. February 3d, during night, was seized with colic; pains in abdomen, greatest in region of stomach and transverse colon; obliged to lie upon face to get any relief. Took cholera remedy, vomited frequently.

February 4th–9th.—Too ill to get up. Pain continues in stomach, increased by moving. Vomiting at intervals; very severe frontal headache; constipated; sleeps but little. Pulse, 120–30; temperature, 100°.

February 10th.—Pulse could not be taken satisfactorily, because of irregular and intermittent heart action. No evidence of valvular disease; temperature in axilla, $97\frac{5}{8}°$; respiration, 31; urine, sp. gr. 1027, half-inch precipitate of albumen, no casts or sugar. Since 4 A. M. much constant pain in left foot, leg and thigh, greatest in foot. Cold, clammy perspiration over whole body. She complains that legs and feet feel ice cold; left foot lost sense of feeling. Very severe lancinating pain, outer surface of left tibia; during absence of pain there was no feeling—"dead."

February 11th.—Pulse, 130; temperature—axilla, 97°; rectum, $102\frac{3}{8}°$. Formication on dorsum of left foot; remainder of foot feels cold and dead; occasional delirium. Pain in leg continues; foot and leg œdematous, and dusky in hue. P. M.—Doctors A. Ross Matheson, I. H. Barber and Charles Jewett saw patient. Surface of left foot and leg nearly to knee cold—colder than the right; dusky or ecchymotic in appearance, greatest at extremities of toes, apparently due to complete suspension of circulation in superficial capillary vessels. Circulation in superficial veins of dorsum of foot and leg almost ceased. Popliteal artery distinctly felt; thought we felt anterior tibial; unable to bend toes at either joint; toes pale, appear to contain little or no blood.

12th, A. M.—Pulse, 133. Surface of left foot and leg, nearly to knee, bluish-black and mottled. Circulation apparently suspended in a deeper set or layer of vessels; circulation in veins of foot very slight; no feeling in foot. P. M.—Had not spoken since noon; seemed to be conscious of pain; appeared to have right hemiplegia.

13th, A. M.—Respiration, 48–50. Unable to count pulse, which was intermittent; much mucus in larynx and bronchial tubes; cannot hear respiratory murmur; patient unable to move right hand or arm; can move left; abdomen tympanitic; right hand pale and dusky in comparison with left.

February 14th, A. M.—Comatose. Respiration, 54. Mottled or ecchymotic appearance has extended half way up left thigh; right foot

and leg, half way to knee, œdematous and bluish, similar to early stage of left. Patient died during afternoon. Autopsy twenty hours after death, in presence of Drs. A. J. C. Skene, I. H. Barber, Charles Jewett, A. Ross Matheson, J. H. Raymond, B. A. Segur and A. Stub. Ecchymotic or dusky hue of limbs remain. Thorax: lungs congested, otherwise normal; heart slightly enlarged, no valvular disease; abdomen: viscera anæmic. No enlargement of mesenteric glands; no ulceration of Peyer's patches or salivary glands, slight enlargement or congestion. Small intestine emptied, slightly rinsed and examined for trichinæ; none found. Left kidney contains a hard cicatricial nodule, about one inch in diameter, buried in cortical and pyramidal substance; remaining portion congested; right kidney congested, otherwise normal; spleen but very slightly enlarged; liver enlarged; color light, fatty; structure anæmic.

No thrombus in upper part of femoral veins. Sections of psoas, laryngeal, pectoral, intercostal, deltoid, sartorius and abdominal muscles were examined for trichinæ, but none found.

Failed to find sufficient cause for death, and want of time prevented examination of brain.

Case III.—Mr. G., German, aged 28, January 31st; had diarrhœa, with some pain in region of stomach.

February 1st.—Cramp or colic pains in abdomen, so severe, caused him to leave business early, to go home and lie down.

February 2d.—Increased diarrhœa; frequent chilliness; vomited but once.

February 3d–6th.—Suffered much from pain, diarrhœa and weakness; went to business part of each day.

February 7th.—Severe pain and slight œdema in orbital region; formication and itching of face and limbs.

February 8th.—Pulse, 90; temperature, $102\frac{7}{8}°$; œdema very great; could separate eyelids only about a quarter of an inch; very bad taste in mouth; sleeplessness; formication slightly less. Prescribed Seidlitz powders to be taken frequently; a solution, of glycerine one part and water two parts, a table-spoonful to be taken every hour.

February 9th.—Pulse, 100; temperature, $103\frac{3}{5}°$; slightly hoarse; mouth tasted very bad; much thick, nasty-tasting mucus in throat; œdema in orbital region diminished one-half; slight œdema of hands, and perhaps of whole body; formication in limbs slight, and only after movement; intermittent ringing noise in both ears, greatest when talked to, and accompanied by occasional lancinating pain shooting towards back of head; pain and soreness in muscles, particularly biceps, triceps, quadriceps, femoris and laryngeal.

February 10th–20th.—Temperature ranged from 101½° to 113½°. Pulse, from 89 to 104. Urine, sp. gr. 1020, no albumen, casts or sugar. Eruption upon face, chest and upper part of abdomen resembling measles; very hoarse; had raised much viscid mucus streaked with blood, from larynx; each day had from two to four fluid stools, greenish in color.

February 20th–25th.—Temperature, 99½ to 101½°; pulse, from 100 to 122; stools light brown, two to five each day.

February 25th–March 1st.—Well-marked œdema of both lower extremities; heart and respiratory sounds normal. Urine, sp. gr. 1015, and negative; severe pain in both limbs.

March 2d–4th.—Œdema and pain very much less; appetite very good.

March 4th–9th.—Convalescent. Took a short carriage-ride each day.

March 10th.—Rode to place of business.

March 11th.—Rode out; afterward did some writing-up of books.

March 12th.—Had breakfast in bed, as usual; ate a good meal; an hour after went into back room to wash; drank a glass of Vichy water. Within five minutes complained of distress about his heart, a sense of suffocation, and laid down upon a bed near by, gasping for breath. His face and lips became cyanosed; he passed to unconsciousness, and died within five minutes.

Autopsy 30 hours after death, in presence of Drs. A. J. C. Skene, I. H. Barber, A. Ross Matheson, Chas. Jewett, B. A. Segur, A. Stub, B. F. Westbrook and Coroner H. C. Simms.

Abdomen.—Viscera anæmic; groups of congested vessels upon surface of ileum; mesenteric glands enlarged; structure congested but not softened; mucous membrane in cardiac portion of stomach ecchymotic and much congested; duodenum and upper part of small intestine normal; Pyer's patches congested, not ulcerated; solitary glands in ileum, cæcum and colon slightly enlarged; no trichinæ found in intestine; liver enlarged, fatty; spleen normal in size and structure; kidneys congested, otherwise normal; heart: general appearance and size, normal; muscular tissue pale; left ventricle empty; right distended with soft blood-clot; all of the valves and aorta in good condition; lungs congested; right and left pulmonary artery and branches for a short distance plugged with a firm clot-embolism.

Large quantities of trichinæ, of various sizes, found in muscular tissue—perhaps greatest number in laryngeal and intercostal muscles. The trichinæ were entirely free from all cyst or envelope, and were seen to coil and uncoil beneath the microscope.

Case IV.—Henrietta D., servant, German, aged 15½

February 1st to 5th.—Severe frontal headache; no appetite; vomited once; pain in back and chest; felt very tired; diarrhœa; too ill to work and went home.

February 7th and 8th.—Felt better; sat up.

February 9th.—Taken ill again; nausea, vomiting; legs "swollen;" pains came back.

February 16th, 3 P. M.—Pulse, 95; temperature, 102½°; no chills; feels hot for about two hours every evening; tongue moist, coated with easily movable thick brownish coating; much "slime" in throat; no vomiting; diarrhœa since February 4th, from two to four fluid greenish stools in twenty-four hours; muscles of arms and forearm very painful to touch, or upon movement; muscles of legs and thighs same, only less in degree; in left foot once or twice a day has feeling of "pins and needles," extending up to middle of thigh, and lasting from a few seconds to a few minutes, this sensation in no other part; severe pain in abdomen, greatest over lower part; "feels so heavy;" head aches much at front and top, especially afternoons and evenings; sweats occasionally at night; some œdema in both feet and limbs to knee; under treatment by family physician for typhoid fever.

March 4th.—Asked to take charge of case; œdema in both legs very great; arms very much wasted, flexed to a right angle, and unable to extend them beyond that point, even when force applied; large bed-sore over sacrum.

March 13th.—Œdema in right leg and foot much diminished; in left increased, and has extended to lower ribs; much greater upon left side of body; right side, outline of crest of ilium conspicuous; upon left buried in œdematous tissues; very severe lancinating pain over whole site of œdema; formication greatest in left leg; pulse, 110; temperature, 99½° F.; urine, sp. gr. 1006–7, a trace of albumen, no sugar or casts.

March 16th.—First called attention to œdema of left labia majora—perhaps two inches in diameter; right not œdematous.

March 24th.—Pulse, 132-8; temperature, 103½° F.; respiration, 32; urine, sp. gr. 1004, negative; œdema of left side has increased up to present time; five or six large feculent greenish stools each day; spots of ecchymosis over region of upper part of femoral vessels; heaviness over whole of abdomen; respiratory murmur normal; breath feels short, as if room filled with smoke; burning sensation in dorsum of right foot and toes; cannot bear weight of bed-clothes upon abdomen without distress; emaciation very great.

March 27th to April 20th.—Œdema slowly lessening; left leg remaining much larger than right; from two to seven stools during twenty-four hours, color changed to brown; voracious appetite; purpuraceous desquamation of epidermis of whole body; later acne.

Fifteen weeks after patient had eaten the raw ham, assisted by Dr. Chas. Jewett extracted a small piece of muscular tissue from insertion of deltoid of left arm and found it to contain about one hundred and fifty trichinæ, entirely free from cyst, or surrounding envelope or membrane.

July 1st.—Left leg remains much larger than right, and patient is obliged to wear support to circulation.

Case V.—Annie G., aged four years; ate but small quantity of the raw ham.

February 4th and 5th.—Chilliness and slight fever.

February 6th.—Child irritable; face, especially about eyes, slightly œdematous; for two weeks had diarrhœa, afterward voracious appetite.

In referring to the symptomatology of trichinosis, as given in Ziemssen's Cyclopædia, it will be seen that, in the above cases, certain symptoms, or facts, are perhaps worthy of notice.

Digestive System.—The evidence of intestinal irritation—pain, vomiting, diarrhœa—in several of the cases appeared in twenty-four hours (and could not have been caused by migration of young trichinæ); the large feculent, greenish stools, changing later to very thin clay-colored or rice-water discharges; diarrhœa in Cases I. and IV. lasting several weeks after convalescence; tongue but little coated, and not dry at highest temperature; the large quantity of viscid mucus, or "slime," with bad taste in mouth, throat, etc.

Muscular System.—Severe and painful cramping of muscles of the face, hands and feet, from fifth to eighth day; lameness or tiredness, as if one had overworked or overwalked, varying in degree in different muscles, increased by movement, coming on as early as ninth day; in Case IV. flexure of forearms to right angle with arms; inability to extend, even by force, save by slow daily passive motion.

Nervous System.—Sleeplessness in Cases I. and II.; "colliac" and "mesenteric neuralgia" in Case I.; formication, generally in extremities, lasting for a few minutes, disappearing for hours, increased by moving affected part; during œdema of lower extremities dreadful pain in limbs, caused by the slightest touch or movement; partial and temporary loss of hearing, independent of any quinine given.

Circulatory System.—Seventh day, œdema of eyelids and face, disappearance in a few days; œdema of body and extremities in Cases II. and IV., as early as tenth or eleventh day, varying from slight to very great, continuing after convalescence. Evidence of thrombosis—in Case II. the obstruction in lower limbs probably originated in capillaries, as no arterial or venous thrombi were found—the right hemiplegia may have been due to embolism; in Case III. death was due to embolism of pulmonary artery; probably embolus came from left femoral vein, as there

had been evidence of phlebitis in that region; in Case IV. the well-marked milk-leg, great œdema of left labia majora and left lower half of trunk, point to thrombosis in the region of left renal vein; epistaxis and slight hemorrhage from rectum (hæmorrhoids) in Case III.

Respiratory System.—Hoarseness, amounting almost to aphonia, in Cases I. and III.; difficult respiration, due to presence of trichinæ in respiratory muscles; bronchitis, or large secretion of viscid mucus.

Genito-urinary Organs.—In Case I. menses returned regularly; in Case IV. had not returned at end of fourth month; urine examined every second or third day; in Case II. a uniform deposit in test-tube of half an inch of albumen—due to previous disease, as revealed by autopsy; in Case IV., during period of greatest œdema of left side and labia, the specific gravity of urine ranged from 1003–8 (perhaps additional proof of phlebitis of left renal vein); at all other examinations specific gravity of urine ranged from 1010–27; tests for sugar, and microscopical examinations for casts, were negative.

Skin.—Profuse sweating from outset of disease was a source of much discomfort; urticaria, petechiæ, and an eruption resembling measles, appeared as early as fifth day; later formication, itching, sudamina; in Case IV. a large bed-sore over sacrum; during convalescence, especially in Case IV., purpuraceous desquamation of epidermis of entire body; a little later acne over whole surface of body, which gradually disappeared.

Fever.—During early stage of disease the temperature was not taken; at no time did the thermometer indicate a temperature above 104° F., and careful examination failed to indicate any special tendency to rise at evening, as in typhoid fever.

Treatment.—After diagnosis consisted in efforts to expel trichinæ from intestine, for which, principally, Seidlitz powders were given; glycerine one part and water two parts, a tablespoonful every hour, was given, with the hope of destroying the worms in the intestine. After four or five days' pretty faithful administration, was obliged to discontinue the remedy because of patient's objection to taste; for sleeplessness, chloral and the bromides were given, with good result; to relieve pain, opium or its preparations were administered; when given in quantities sufficient to check or arrest diarrhœa it seemed repeatedly to cause distress, temperature to rise and pulse to increase in frequency; stimulants were used freely; quinine, iron, digitalis, ammonia, nux vomica and slight amount of arsenic were given, with concentrated and liberal nourishment to support powers of life; favorable position, rubbing and bandaging for œdema.

The duration of incubation must have been short; the raw ham cut into thin slices and taken into the alimentary canal was under conditions most favorable for rapid development of trichinæ.

The family had not eaten any but well-cooked pork for two or three months preceding January 30th.

The duration of illness in case of child was short (she ate but very small quantity of the ham), less than two weeks. In the case of wife and servant convalescence was not complete at expiration of fifteenth week.

Portions of several stools were examined with microscope for intestinal trichinæ, but none were found.

No particle of the suspected ham could be found, to submit to microscopical examination, but I entertain no doubt as to its being the cause of these cases of trichinosis.

The muscle-trichinæ in Case III., found forty-four days after eating the ham, varied in size, were seen to coil or uncoil beneath the microscope, and did not have any membrane, capsule or granular matter surrounding them. In Case IV., fifteen weeks after eating ham, a small portion of left deltoid, near insertion, was extracted, and examined by Dr. Chas. Jewett; the piece contained about one hundred and fifty well-developed muscle-trichinæ, and in neither of the repeated examinations could any capsule, membrane or granular substance be discovered. (This case would go to prove that convalescence does not depend upon muscle-trichinæ becoming encapsulated.)

Recent examinations seem to indicate that in this country the number of hogs infected with trichinæ are increasing. In Chicago, in 1866, examination of 1,394 hogs proved about 2 in 100 were trichinous.* In the vicinity of Rome, N. Y., in 1869, 100 hogs were examined, and trichinæ found in four.† In 1878 Drs. Atwood and Belford, of Chicago, examined 100 hogs and found 8 to contain trichinæ.‡ Prof. Richard Heschel, of Vienna, says recently upon this subject, "According to an official report of American hams inspected in North Germany, one in from five to ten is condemned, while among 2,000 or 2,500 Westphalian hams only one is infected."§ The Drs. A. and B. above mentioned instituted a number of experiments to render harmless flesh containing trichinæ, and found "sulphurous acid to instantly kill the worms; it readily permeates the entire ham, and is as readily expelled." Within the last few months, in this country, several groups of cases have occurred. In *Am. Bi-Weekly* for April, 1879, Dr. E. H. Loughron, of Kingston, N. Y., reports six cases from eating portions of a raw or im-

* *Med. News and Library*, Phil., July, 1866.

† Transactions N. Y. State Med. Society, 1870.

‡ *Am. Jour. Microscopy*, Jan., 1879.

§ Ibid.

perfectly cooked ham; all children; three deaths from protracted illness, two from exhaustion, and one from gangrene of lung.

In *Mich. Med. News*, April and May, 1879, two cases are reported, aged 3½ and 6½ years; the former died after an illness of six weeks.

Those interested will find elaborate articles upon this subject by E. R. Hun, of Albany, in Transactions N. Y. State Med. Soc., 1869, and in Ziemssen's Cyclopædia, Vol. III.

EUCALYPTUS IN ALBUMINURIA.

BY WM. ANDERSON, L. R. C. P. AND S., EDIN.

My attention was first specially directed to eucalyptus by a paper read before this Society in August, 1876, by Dr. J. B. Leary, on "Eucalyptus in Dropsies." He then reported that he had used it with great success as a diuretic in dropsy occurring as a result chiefly of cardiac and hepatic disease. Its remarkable power in albuminuria had apparently not been observed by him, nor have I yet found any mention of this fact elsewhere, although a great deal has been written about this useful addition to our armamentarium.

The first case in which I tried eucalyptus was in the summer of 1877, on a dissipated tinsmith, about 30 years of age, who came under my care at the Southern Dispensary. He had general anasarca; the feet and legs were very much swollen; face and hands puffy; lungs œdematous, giving rise to severe coughing and short, labored breathing. He had no appetite, was constipated, and passed very little water. He had had no previous disease to account for his condition; but no good history could be had, further than that the sickness had come on slowly a week or two before his coming to me. I considered it a case of Bright's disease, gave him some of the routine dispensary prescriptions, and requested him to call at my office with a specimen of his urine. This he did in a few days, and on testing it I found it almost solid with albumen. As he had not improved any, and his face was cyanotic, I resolved to try the eucalyptus, merely for its diuretic effects.

Being too poor to purchase medicine, one of my druggist friends kindly supplied him with some of the fluid extract of eucalyptus globulus, which I ordered him to take in ten-drop doses four times a day; and likewise to drink as much milk as he was able. From that day he began rapidly to improve—the urine increasing in quantity, while the albumen decreased in volume. His appetite improved, the bowels acted well,

and the breathing became much easier. I examined the urine every few days, and the regular diminution of the albumen was remarkable. After steady progress for about three weeks he ran out of medicine, and neglecting to get it renewed, the albumen at once began to increase. On again taking the eucalyptus steadily he speedily got well, till no albumen remained. In about six weeks from the commencement of treatment he was able to return to work, and had sufficient energy to commit a felonious assault on a fellow-workman, for which he was sent to prison for nine months. I saw him once after he was liberated, and he was apparently sound and strong. The results were the more remarkable from the fact of his extreme poverty and unhealthy surroundings. He could not get regularly even the cheap milk he was ordered. As he had no medicine of any kind but the eucalyptus, the only element of doubt in his case would be the part played by the milk. But this diet, while no doubt a great help, I feel sure would not alone have caused such rapid and uniform improvement. My description of his case fails to give a correct picture of the hopeless look he had when he commenced the treatment; and one acute physician who saw him along with me at the beginning, remarked that I would soon have a death certificate to write, in which opinion I quite coincided.

The last severe case I had was an Irish 'longshoreman, 54 years of age, of steady habits. I was called to see him in November, 1878, and found him suffering from headache, slight cough, pains in chest and loins, and a feeling of general debility. The feet were very slightly swollen, and I thought I detected slight dullness over the lungs posteriorly, as if from œdema. There was nothing seemingly to account for the extreme debility; but on particular inquiry I found that he passed less water than usual, and I concluded to test his urine before prescribing. He stated that he had been gradually getting weaker for some weeks previous to calling me, and thinking he was suffering from a severe cold, the result of a wetting, had been treating himself for some days. As the urine, on examination, was found to be almost solid with albumen, after being allowed to cool and settle, I concluded that he was suffering from chronic Bright's disease, and that at his age the prognosis was not very favorable.

Encouraged by previous success, I prescribed eucalyptus, a milk diet, and, as he was constipated, some powders of calomel and jalap. Immediately the urine increased and the albumen decreased ; but he suffered from intense headache and vomiting for several days, whether as the effects of the medicine or blood-poisoning I could not decide, as I did not care to omit the eucalyptus to try. The slight swelling soon left his feet, but his cough persisted. As he was very low and despondent, and his friends all expected he was about to die, a consultation was requested.

Accordingly Dr. Skene saw the case with me, and concluded that it was a case of cirrhotic kidney disease, with a very doubtful prognosis. As I had met with such success in previous cases, the doctor advised me just to continue the treatment I had adopted. Not to go into detail, the albumen daily decreased, all his symptoms improved, and in a fortnight I ceased to visit him, as his urine was quite normal. He was very weak for a month or two, but resumed work as 'longshoreman some months ago, and to-day is quite well.

I have treated several cases of post-scarlatinal nephritis with eucalyptus, and always with a favorable result. Thinking this drug might act usefully as a prophylactic of this troublesome sequela of scarlatina, I have, during the last year, generally prescribed the elixir of eucalyptus as a vehicle for any medicine I might employ in the treatment of the fever itself, and I believe I have less nephritis to deal with now than under any other plan that I know of.

I prescribed eucalyptus in the case of a woman seven months pregnant, whose urine was very scanty, and almost solid with albumen. I was in dread of uræmic convulsions, but she rapidly improved, and was delivered of a healthy child at full term.

Albuminuria, like dropsy, is a symptom of variable significance, though always somewhat serious. It would have added much to the scientific value of these observations had a microscopical examination been held of the various deposits; but as I am not an expert with that instrument, and had no thought of publishing my experience, I was content to judge matters from the stand-point of ordinary experience. Comparing the results obtained by me now, with those obtained by the former methods, I am very decidedly of opinion that we have in eucalyptus a drug as useful in albuminuria as iodine is in malaria. That it will cure every form of Bright's disease, and at any stage, is not to be expected; but, considering the serious nature of this disease, and how often it tends to death in spite of all our care, it is certainly well deserving a trial at our hands.

I have been in the habit of prescribing the fluid extract in doses of about ten drops, every four or six hours, diluted with water. If given in a mixture it is necessary to use glycerine or syrup of acacia, otherwise the resin is precipitated. The elixir is a very pleasant preparation for children, and probably quite as efficacious as the extract. though there is room for observation here. It can also be had in the shape of coated pills, a form suitable for very chronic cases.

DISCUSSION.

Dr. Fearn: In scarlatinal nephritis he had been in the habit of using belladonna, principally Squibb's solid extract, also in other forms

of acute albuminuria, with a large degree of success. Cases referred to in brief. This use of belladonna he had learned from Harley, an authority worthy of far more attention than has been afforded him.

Dr. Risch: Have at present under treatment a boy, four years old, who has for over a year been affected with general anasarca. First saw him three weeks ago, when he had some elevation of temperature, rapid respiration, with moist râles. Feet, legs and face œdematous, and abdomen very much distended; had been unable to walk for some time. Skin very dry, bowels not free; passed scanty urine of high specific gravity, about one-fourth of albumen. On recommendation of Dr. Anderson, I put the child upon eight minims of fluid extract of eucalyptus every three hours. The fever, which was probably malarial, disappeared; the appetite improved greatly; more urine was passed.

The œdema of the feet and legs has disappeared, the breathing is normal, but there yet remains some hydroperitoneum, which is probably due to some impediment in the circulation through the liver. The albumen in the urine has gradually diminished more than one-half.

He is now able to go again out-of-doors.

The boy had been given daily a decoction of juniper berries, which, increasing the congestion of the already congested kidneys, caused very profuse diuresis; to this is ascribed the chronicity of the case.

BROOKLYN ANATOMICAL AND SURGICAL CLUB.

Stated Meeting, June 16th, 1879.

The President, Dr. L. S. Pilcher, in the chair.

ABSCESS OF THE CEREBELLUM AND INFLAMMATION OF THE LATERAL SINUSES, WITH SYMPTOMS SIMULATING EAR DISEASE.

Dr. G. R. Fowler presented the cerebellum and dura mater of a patient recently under his care, accompanying them with the following history and description:

S. Elmer Thursby, a lad of 17 years, came under my care April 5th, 1879, complaining of pain in the left ear, of ten days' duration. Membrana tympani was slightly injected; watch could be heard at distance of two inches only from ear; hearing on opposite side normal. Nothing else discernible.

In a few days the pains became radiating in character, extending to the temporal and occipital regions. A slight elevation of temperature (101° Fahr.) was observed at this time.

Daily ocular inspection of the drum membrane failed to reveal anything further abnormal; the acute radiating pain, however, continued unrelieved. A slight tenderness over the mastoid cells was noted; the application of leeches, followed by blistering, produced some temporary relief. Bromide and iodide of potassium ordered.

Thus matters continued for nearly three weeks, when extreme giddiness and nausea supervened. Dr. Prout was then called in consultation, who advised and performed incision of the drum membrane; a slight discharge of reddish serum followed. Wilde's incision over the mastoid cells was also practiced, but with negative results.

For a few days the urgent symptoms were relieved, afterwards returning with all their original severity. The giddiness was so great as to compel the patient to maintain a strictly horizontal position, and the nausea became so uncontrollable, that all medication, with the exception of an occasional dose of morphia to relieve the intense radiating pains, was suspended. Nutritious enemata were employed to sustain the failing vital powers. The pulse at this time ranged from 80 to 100, and the temperature remained normal.

On May 17th several slight rigors were experienced, not followed, however, by any rise of temperature.

Dr. Prout saw him again with me on the 20th of May. Abscess of the brain was suspected, although no paralysis or other evidences of pressure could be made out. Intelligence perfect.

On the evening of the 23d of May, upon attempting to rise from his pillow a sudden increase of the pain occurred, delirium immediately following and continuing through the night. On the morning of the 24th a convulsion took place, followed by paralysis of the left side and converging strabismus of the left eye. He died comatose at 8.20 A. M.

Autopsy thirty-six hours after death—present, Drs. Prout, Shaw, Pilcher and King.

Upon removing the calvarium about two ounces of pus escaped from the neighborhood of the left lobe of the cerebellum. After detaching the dura mater and removing the cerebrum, an abscess of the cerebellum was discovered. Its cavity, as shown by the specimen here presented, was about double the size of an English walnut and still contained considerable pus. The walls of both lateral sinuses were found to be very much thickened by a deposit of plastic lymph upon their interior, showing that extensive inflammation of these vessels had occurred; no thrombus was found in them, and their canal was pervi-

ous, though greatly contracted. The petrous portion of the temporal bone was removed, and submitted to Dr. Prout for further examination and report.

Dr. J. S. Prout said that a careful examination of the middle ear had failed to reveal any disease therein. The opening made by him in the drum membrane had closed, there was no fluid in the drum cavity or in the mastoid cells. There was no caries of the temporal bone; but the surface of the petrous portion at its base, in the region of the lateral sinus and above, was slightly eroded, as a result of the inflammation of the neighboring soft parts. The superior and posterior semicircular canals were opened and the apex of the cochlea, but no evidence of disease was found. Three days before death his hearing on the affected side was fair. The case is very difficult to explain. Either there was in the beginning a slight acute otitis media, which passed into the cranium by some not recognized channel, leaving behind it in the cavity of the tympanum no sign of its previous existence, or the disease originated in the sinuses or cerebellum, and the ear symptoms were an accidental coincidence or a consequence from neighborhood.

Dr. A. Matthewson said that according to his experience the case presented by Drs. Fowler and Prout was unique, as he had never seen or read of just such a one. A case presenting in one respect some analogy to it he had lately seen in consultation with Dr. Rockwell. A young child, very much reduced from the effects of sewer gas-poison, had a suppurative inflammation of the middle ear with perforation of the membrana tympani, and a fetid discharge, which resisted treatment, and after a time extended to the mastoid region. Incision behind the ear discovered pus and dead bone, with an opening through which a probe could be easily passed a considerable distance into the mastoid cells. This incision was kept open while the caries was treated by applications of dilute sulphuric acid for some weeks. In the mean time the perforation of the drum membrane closed, and the middle ear, so far as could be determined by inspection, had resumed a perfectly normal condition, although the disease of the mastoid still continued—showing how the disease may leave its original seat while it yet remains in parts secondarily affected.

He remarked that in cases of otitis media the disease sometimes very rapidly extends to the intra-cranial parts, producing meningitis or abscess even before perforation of the membrana tympani has taken place; and that perforation may not occur at all. That this should be so is not surprising, when we consider how very thin the walls which separate the tympanic and cranial cavities often are, and also the fact that gaps (not the result of disease) are sometimes found in these walls, as shown in a preparation presented.

Dr. M. also exhibited a cranium in which, on one side, the groove of the lateral sinus was very deep, and the outer wall of this groove so thin as to be translucent, while on the other side the groove was shallow and its walls thick. This specimen illustrated the necessity of caution in operations upon the mastoid, lest the lateral sinus be invaded.

Dr. L. C. Gray said that the occipital headache, its persistent and violent character, the great disturbance of the stomach and the non-impairment of the mental faculties, were typical of tumor of the cerebellum. As the patient had been confined to bed, any lack of co-ordination or any minor degree of paralysis, which are often observed in cerebellar disease, might have escaped observation. Dr. Gray then alluded, in speaking of the aural troubles, to the fact which distinguished the auditory from all the other cranial nerves, viz., its origin by one root from the cerebellum, whereas the others, with two exceptions, arose from the floor of the fourth ventricle. It was well known that every artery of the brain was surrounded by a peri-vascular space, which was filled by the subarachnoid fluid and communicated with the subarachnoid spaces; and the researches of Schwalbe had also demonstrated that these peri-vascular spaces were found around all the cranial nerves, accompanying them to their terminations. This latter fact would explain the mode of origin of many obscure aural troubles. The cerebellar abscess had been probably the original trouble, and thence had arisen the lesion of the ear by irritation, or by increase of pressure upon the fluid contained within the lymph-space around the auditory nerve.

Dr. B. F. Westbrook said that the interference with the venous circulation in the temporal bone might account for the accumulation of bloody serum which was evacuated, and if so there was no evidence of ear trouble having been the primary lesion. Also that the external strabismus which finally occurred might have been due to irritation of the sympathetic, as it had been shown by Dr. Ogle that there is a communication between that nerve and the abducens in the cavernous sinus. In that case we should expect to find dilatation of the pupil on the same side.

Dr. L. S. Pilcher remarked that the condition of the lateral sinuses was important to be observed; upon the interior of their walls, as could be seen, had been deposited repeated laminæ of plastic lymph, which had become partially organized, and which extended from one jugular sinus to the other, and at the time of the examination was traceable out of the cranium down into the left jugular vein for some distance; this condition testified to the disease of these sinuses long antedating the symptoms detailed by Dr. Fowler. He thought that it was evident that the primary disease had been in the lateral sinuses, and that the earache and cerebellar abscess were sequels thereto.

STRANGULATED HERNIA.

Dr. J. H. Hunt presented a large hernial sac, with that portion of the abdominal wall in which were the hernial apertures, containing a mass of intestine, consisting of part of the ascending colon, the cæcum and much of the ileum, in all eight feet of intestine, the convolutions of which were so adherent to each other as to make an irreducible mass as large as a child's head filling the sac. The position of the internal epigastric artery to the inside of the neck of the sac showed that the hernia had been originally an indirect inguinal one, but the long duration of the hernia had effaced all traces of a canal, and converted it into simply a large direct opening, with a dense cordlike margin at the seat of the external abdominal ring.

The age of the man from whom the specimen had been obtained was 76 years; early in life he was ruptured on both sides; for more than thirty years he had worn no truss, and his locomotion had been interfered with by the large scrotal tumor depending to the middle of the thighs; during this time he is said to have had several attacks of strangulation, from which he was relieved by taxis. The last attack occurred three years before the one which proved fatal. The trouble was always with the right hernia, the specimen presented; the left hernia, much the smaller, seems never to have caused trouble. In the latter part of April last strangulation upon the right side again occurred; all efforts to reduce it failed; no operation was attempted; death by exhaustion at end of third day. At the autopsy it was found that behind and in addition to the old mass which occupied the sac, and which showed no signs of strangulation, a loop of the jejunum, five feet long, had been forced out, and being nipped between the hard edge of the ring and the compressed mass forming the pedicle of the old hernia, had become strangulated. There was no gangrene.

The case had occurred in the practice of Dr. F. W. Bowron, to whom Dr. H. was indebted for the specimen which he presented.

——Iridescent Glass.—This beautiful new commodity is made by exposing glass, at a high temperature, to the fumes of stannic chloride, to which barium or strontium nitrate is added, when deep colors are desired.

Ἀσκληπιὸς ὁ Σωτὴρ

Χαρμα μέγ' ανθρωποισι, κακων θελκτῆρ' οδυναων.

Hymns of Homer, No. XVI.

PROLIFERATIONS.

——At the December Meeting Dr. S. G. Armor read a paper on the "Symptoms and Signs of the Precursory Stage of Constitutional Phthisis" (printed in the Proceedings, January, 1879), which excited so much interest and elicited so much discussion that it was voted to continue it at a subsequent meeting. It is proposed to devote the November meeting to this discussion, which Dr. Armor promises to open, and which, it is expected, will be continued by the following gentlemen: Dr. Sherwell, on the Throat Complications; Dr. Shaw, on Tuberculosis, as it affects the Nervous System; Dr. Skene, as it appears in Gynecological Practice; Dr. Walker, as it affects Children; and Dr. Sizer, in its Pathology and Literature. It is not desired, however, to restrict the discussion to what may be said by these members, but the hope is indulged in that many others may take part in it.

——Iodine in Intermittents.—Among the first, if not the first, contributions to this treatment, is that of Dr. Willibrand, in Virchow's *Archiv.*, XLVII., 243.

——An Irish Benevolent Society's report states that, "Notwithstanding the large amount paid for medicine and medical attendance, very few deaths occurred during the year."

——The Medical Profession stands alone in the world, in that it devotes almost its chief energy to the injury of its own pecuniary interests.—Col. Geo. E. Waring, *The Plumber*, July 15th.

——Longevity in European Countries.—Herr Max Waldstein, of Vienna, states that in Europe there are 102,831 persons over 90 years old, of whom 60,303 are women. Of those over 100 years old, there are 241 women and 161 men in Italy; in Austria, 229 women and 183 men; in Hungary, 526 women and 524 men.—*Eclectic* for August.

——New Exchanges.—St. Bartholomew's Hospital Reports, Vol. XIV. This volume contains the outgivings of the year 1877-8, edited by Dr. W. S. Church and Mr. Alfred Willett. Mr. Callender quotes from Dr. Wight's article in this journal, on the Asymmetry of Limbs, and gives a series of 25 measurements, from which he infers that Dr. W.'s position has not been proven. The administration of anæsthetics in that hospital in 1877 was practiced 1,896 times, as follows: ether, preceded by nitrous oxide, 1,123; chloroform, 699; nitrous oxide alone, 29; ether alone, 23; bichloride of methylene, 22 times. Price, 8*s.* 6*d.* Smith, Elder & Co., London.

The Archives of Medicine, a Bi-monthly Journal. Editor: E. C. Seguin, M.D.; assistant editors: Drs. Thomas A. McBride, M. D. Mann and L. A. Stimson. It is issued by G. P. Putnam's Sons, 182 Fifth Avenue, N. Y., in a style unequaled by any foreign or domestic medical journal. Among the contributors to the first three numbers appear the names of many of the most eminent physicians in New York City, as Thomas, Heitzman, Delafield and Jacobi. Price, $3.00 per annum.

Public Health, a Weekly Journal, with Dr. Edward J. Bermingham as editor, issued its first number July 5th, 1879. Its motto is, "The laws of health are the laws of God, and as binding on man as the Decalogue." Price, $2.00 per annum. No. 19 Lafayette Place.

The Eclectic Magazine has been newly added to our exchange list.

——Nerve-stretching for the cure of tetanus has been attended by a small proportion of successes. On this account, no little interest attaches to the full report of a successful case to be found in the *Glasgow Med. Jl.*, July, ably reported by Mr. H. E. Clark.

——Joseph Howard was born in Salem, Mass., September 20th, 1807. He graduated and received his degree of A.B. from Amherst College in 1827, and his degree of A.M. in 1830. During the years 1828, '29 and '30 he was connected with the New York Hospital, and in 1831 received his M.D. from New York University. His connection with the Medical Society of the County of Kings began January 12th, 1835. He died April 14th, 1879. Dr. Howard had not been in practice for the last ten or fifteen years of his life, and was therefore unknown to the younger practitioners in the Society. Those who knew him remember him as being unusually skilled in his profession, and also in other sciences than that of medicine. His thorough classical education and natural fondness for his books made him one of the best and most thorough students in our ranks, while his researches in the field of physical science placed him, during his active life, in the society and fellowship of scientists.

Theodore L. Mason, M.D.,
J. H. Raymond, M.D.,
Committee.

——The Regular Monthly Meetings of the Medical Society of the County of Kings are held at 8 P. M., on the third Tuesday of each month, at Everett Hall, 398 Fulton Street.

The August meeting will be held on the 19th, at which there will be presented the following paper:

Yellow Fever. Dr. O. J. D. Hughes.

——New Members.—At the July Meeting the following new members were elected: Joseph Creamer, M.D., Coll. P. & S. N. Y., 1850; C. A. Limeburner, M.D., Coll. P. & S. N. Y., 1879; F. B. Gillette, M.D., Univ. Pa., 1856; G. W. Newman, M.D., Univ. N. Y., 1864; James F. Feeley, M.D., Univ. N. Y., 1865; T. A. Van Duzee, M.D., Univ. N. Y., 1873; E. A. Wheeler, M.D., Bell. H. M. C., 1879.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

OFFICERS AND COMMITTEES FOR 1879.

President.....J. S. Prout, M.D., 167 Clinton St.
Vice-President.....C. Jewett, M.D., 310 Gates Ave.
Secretary.....R. M. Wyckoff, M.D., 532 Clinton Ave.
Assistant Secretary..... J. H. Hunt, M.D., 419 Hart St.
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CENSORS.

F. W. Rockwell, M.D. (Senior Censor), 6 Lafayette Ave.
G. W. Baker, M. D., 48 Bedford Ave., E. D. B. A. Segur, M.D., 281 Henry St.
A. Hutchins, M.D., 796 De Kalb Ave. L. S. Pilcher, M.D., 4 Monroe St.

DELEGATES TO THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

(1878 to 1882.)

Drs. J. C. Shaw,	Drs. A. J. C. Skene,	Drs. E. N. Chapman,
J. D. Rushmore,	G. G. Hopkins,	J. S. Prout,
R. M. Wyckoff,	A. Mathewson,	F. W. Rockwell.

Chap. XI, Art. 2, of By-laws: "Any Member elected as Delegate to the Medical Society of the State of New York, who shall be unable to act as Delegate during two successive years, shall be considered to have vacated his position as Delegate."

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION.

Drs. Andrews,	Drs. French,	Drs. Pilcher,
Bodkin,	Garrigues,	Schapps,
F. H. Colton,	Hawley,	Shaw,
Dodge,	Hutchison,	Sherwell,
Fessenden,	Mathewson,	Westbrook.

COMMITTEES OF THE SOCIETY.

HYGIENE.

Drs. T. P. Corbally, J. Walker, W. E. Griffiths, B. Edson, A. W. Ford.

REGISTRATION.

Drs. R. W. Wyckoff,	Drs. W. G. Russell,	Drs. R. M. Buell,
W. E. Griffiths,	N. Matson,	A. S. Clarke,
J. A. Jenkins,	F. W. Rockwell.	

PUBLIC INSTRUCTION.

Drs. A. J. C. Skene, C. L. Mitchell, E. R. Squibb, J. T. Conkling, J. C. Hutchison.

PHYSICIANS' MUTUAL AID ASSOCIATION.

Drs. B. A. Segur, W. W. Reese, J. H. H. Burge, A. Hutchins, W. G. Russell.

PROCEEDINGS

OF THE

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

STATED MEETING, AUGUST 19, 1879.

PERSONAL EXPERIENCE WITH YELLOW FEVER.

BY O. J. D. HUGHES, M.D.

History.—The first known of this disease in the Americas (according to Dr. Thos. Romay, who read a paper before the Patriotic Society of Havana, April 5th, 1797), called by the French "Maladie de Siam," and by the English "Yellow Fever or Black Vomit," was brought by a large French fleet from Siam to the Island of Martinique. It has been impossible to find out exactly in what year this happened, but according to Macittrick, the new arrivals at Barbadoes, in 1718, were all afflicted with it.

By the description which Pouppé Desportes gives of it, it is sure that he observed it in the French colony of St. Domingo, in the year 1733, under the name of "Maladie de Siam." In the year 1741 the British fleet, commanded by Vernon, arrived in the Bay of Guantánamo, on the southern part of the Island of Cuba, with a great portion of the men suffering from this disease. This, I believe, is the first appearance, or, more properly speaking, the first introduction of the disease into the Island of Cuba. In the year 1762 the disease first appeared in the City of Havana, and at that time made frightful ravages into the ranks of the then occupying British military and naval forces; then followed the epidemics of 1780; then again the fearful one commencing in the month of June, 1794, which lasted till the 28th day of August of the same year, on

which day there occurred a fearful hurricane which drove it away (or, at least, so say the records of the City of Havana). As far as I have been able to find out, the first epidemic of the disease occurring in the United States was in the State of North Carolina, in or about the year 1690, the disease lasting from the commencement of June to the 21st of September, the thermometer falling on that day to 58° Fahrenheit, which stopped the disease completely. We next have the epidemics in Philadelphia in 1699, 1741, 1747, 1762 and 1793.

Then, in this century, we have those of New Orleans, New York, Philadelphia, Baton Rouge, Donaldsonville, Wilmington, Columbia, S. C., Savannah, Mobile, Buenos Aires, Rio de Janeiro, Vera Cruz, Havana, and many more places too numerous to mention, to say nothing of that terrible scourge which devastated the whole South last year; though I believe a great many doubt if it was yellow fever or something else; but we will not discuss that subject.

Causes.—Under this head I will not pretend to enter minutely, for the simple reason that I would tire your patience completely listening to a lot of hearsays (if I may be allowed to call them that). To speak plainly —What causes yellow fever? is, as far as I have been able to learn from the many books on the subject and from men who have been all their professional lives studying it, a thing to be yet found out. Dr. Barton, of New Orleans (in his grand Report of the Epidemic in that city in the year 1853), puts it very neatly, I think, when he says: "Many who investigate yellow fever form theories and afterwards hunt for facts, and they are apt to get hold of instances which favor their theories. These, when arranged in a catalogue, appear quite formidable, but when investigated quite a different result is obtained."

But let us go over certain things which are claimed to be causes, viz.:

Dew.—There is one thing certain, that if a person be exposed to the great amount of dew that falls in the tropics, he is much more liable to get yellow fever. I have known men on board the ships in which I have been as surgeon, to come up from the forecastle and sleep in some quiet, out-of-the-way spot, exposed (though nice and cool) to the heavy falling dew for two or three hours, before the officer of the deck found them out and sent them below. At next morning sick-call I would be pretty sure to have them report themselves, complaining of pains in the back, headache, etc., and little by little all the symptoms of yellow fever show themselves. I have seen this thing happen not once, but a great many times.

The natives of all the tropical countries, it is well known, avoid being in the dew; and I have heard them time and time again warn strangers (that is to say, unacclimated persons) from exposing themselves after sunset.

Fruit.—Another direct or indirect cause, as you may be pleased to call it, is, that people coming from Northern climates unaccustomed to eat tropical or semi-tropical fruit, start and stuff themselves full of all kinds of these delicious growths, then drink considerable spirits and cold iced drinks; on top of that eat everything and try everything else, till they get their stomachs so out of order that they fall easy victims to Yellow Jack.

Filth vs. cleanliness are well illustrated in the cities of Havana and Vera Cruz, the former being, without any exception, one of the dirtiest places I have ever had the pleasure of visiting (almost as bad as some places not a hundred miles from our own city), and the latter a model city in the way of cleanliness, and still yellow fever rages in both. The type is perhaps the worst in Vera Cruz.

"One thing is certain, that filth produces disease everywhere, and particularly in a warm, humid climate and season." There, I think, the disease will, as a rule, be yellow fever, whilst in a more northern climate we would have typhoid, typhus and that great malarial family.

Can a sound or well person take yellow fever from a yellow fever patient, without being exposed to the special miasm which is said to generate this disease? Or can a person who is himself affected with the disease carry it to a neighboring State, country or place, and there infect or give it to other people?

I think it has been pretty thoroughly settled that this is impossible; but at the same time we know that ships and their cargoes, that clothing of individuals who have been affected with this disease, or exposed to the miasm, will carry it.

Heat, we know, is one of the principal agents which must be present in order to generate this disease. A temperature of at least 80° Fahrenheit, or thereabouts, is required for some time before it shows itself.

Clinical History.—Yellow fever, as a rule, comes on all of a sudden, without any warning, just—if I may be allowed to use the illustration—like a squall in the tropics. Some claim that they can detect its approach two, three, or even *four* days before it fairly shows itself. This may be so, but I am inclined to be extremely doubtful of their wonderful powers of diagnosis.

The first symptom which I have generally found present is the chilly sensation which patients say they feel down their back; it can hardly be called a chill, though some writers claim a distinct chill; but, as a rule, these gentlemen admit that they have never seen a case; or, perhaps, that they may have seen a case in some northern port, after the patient has made a longer or shorter journey by sea or land, and has stood the tender care of a quarantine hospital. Following this chilly sensation we

have a well-marked fever, with great augmentation of pulse (100 per minute), pain in limbs, along spine, and markedly in the back of the head; conjunctiva markedly injected and with a yellowish hue; tenderness over epigastric region (this symptom I have never found wanting); tongue very dark in the centre, with dirty yellow-looking sides; stomach out of order and patients inclined to vomit (the vomited material in the first stage of the disease being a slimy, mucous-like substance); bowels constipated.

The first stage of this disease is a febrile one, lasting from one hour and a half to three days. With the most cases I have seen it has only lasted about an average of twenty hours. The prevailing idea in the tropics seems to be that *this* is the really critical point of the trouble. Following this we have a complete cessation (*this is the second stage*) of all febrile symptoms; the patient feels first-rate, and is certain he is quite well. In this stage, gentlemen, if it be ever your luck to treat a yellow fever patient, do not leave him, under any consideration. Stay by his bedside as if he were your dearest friend, for you do not know what turn Yellow Jack may take without the slightest warning. The pulse may go down to almost nothing (say 25 to 35), and then you find the patient, of whom you have been so hopeful only a few minutes before, in a complete state of collapse (third stage); then you have your black vomit coming along, and as far as I have been able to see, once a yellow fever patient gets down in that low state, you may, in ninety-nine cases out of one hundred, put him down as a dead man. I remember a case in point, whilst I was surgeon of one of the steamers that run down to the West Indies. I left a young man on board who was in this second stage, whilst I went to the nearest drug store in the port in which we were lying at anchor, to get something I happened to want; I was gone in all about half an hour, and on coming on board again I found my patient dead. I was told by the nurse that a few minutes after I left the ship he commenced to sink very rapidly, and, though stimulants were used at once, in fifteen minutes he was dead. We have been looking so far on the dark side of the picture; let us turn over and take a peep at the bright side. After the febrile symptoms subside the patient may go along perfectly smoothly on the road to health; though this will not be very easy, as yellow fever, as a rule, leaves patients in a very weak condition; it is often a month or two before they really regain their strength, if they do then.

Post-mortem Appearances.—Under this head I have not got very much to say. I have taken every opportunity to see post-mortems, both in this country and in the tropics. I have found *the liver* in the majority of cases a deep orange yellow, very much congested and easily torn apart,

with an oily-like feeling to the touch; then, in other cases, though *by far the smallest* amount, I have seen it dry and very anæmic. The *spleen* engorged and with a shriveled-like appearance of its outer coat. The *stomach* I have always found very much congested, the mucous covering being, as a rule, very red and hard, its surface covered with a more or less quantity of black vomit. I have seen a case in which the peritoneal and mucous coats were both perforated.

The *omentum* is, as a rule, of a deep yellow, with the blood-vessels very much engorged. The *heart* I have seen to contain a clot in one or two cases. In two cases in which I have examined the *brain*, I have found nothing abnormal to speak of.

The *Prognosis* of this disease is, as a rule, anything but a cheerful thing to contemplate, as there is no putting any dependence on any one symptom or set of symptoms; and I think a physician had better be mighty non-committal, as cases which seem at one moment on the eve of recovery at the next are on the road to the cemetery, and cases which he has made up his mind are going to die, will get well on his hands. Still we have certain symptoms that, when they occur, we may pretty generally make a fatal prognosis—viz., when the patient is suffering at all from suppression of urine, when they rally quickly after a sharp attack of black vomit, and seem to be almost well enough to get out of bed, look out, for it may take only a few hours or minutes to finish your patient. Again, when the patient shows the slightest signs of convulsions or coma. I have seen a case in which the patient had a violent attack of hiccough before death, and there are some practitioners who put a great deal of importance on this symptom. An excessive amount of albumen in the urine is also very unfavorable.

The *Diagnosis* of yellow fever, like all other fevers, for the first day or two, is pretty difficult, but after that the symptoms become so marked that the task of making a diagnosis is very much easier. First of all, your patient will complain of a languid sensation; then follows pain in the back of the head, well marked; pain in the back and lower extremities; a high fever, running from 100° to 104°; the conjunctiva becomes markedly injected, with a yellowish cast; and afterwards the eyeball assumes a "ball-of-fire"-like look; the face takes on a drunken-like stare, which, when once seen, is never forgotten. The bowels, as a rule, are very much constipated. The stomach is excessively irritable. The urine, in every case that I have seen which has terminated fatally, has contained from one-sixth to one-third of its quantity of albumen, and I think that the urine of every yellow fever patient contains a more or less quantity of it, though I do not think this can be laid down as a rule, as I have seen mild or so-called "walking cases" that have had no traces of it.

having continued an indefinite period of time, is followed by an intense degree of heat, quickened and laborious respiration, pulse for the most frequent, full, hard and throbbing, skin dry, tongue whitish and moist, bowels generally costive, great depression of the precordia, attended also with acute pains of the head, back and loins, with a suffusion of the whole countenance, but particularly of the eyes. In this state of the disease the patient is restless, sleeps little, and awakes without being refreshed; the thirst also from the first invasion of the disease being excessive.

These symptoms, if not relieved, only prove to be the percursors of another set of symptoms infinitely more dangerous, and to which the assistance of the physician can afford very little relief. The pulse sinks, becomes weak, very frequent, and often intermittent. The state of the tongue is infinitely more alarming, having changed from a whitish color to one almost approaching to black. The redness of the countenance generally, and eyes in particular, is now followed by a yellow color. The whole body often takes on the same appearance. The vomiting, which at first was by no means very alarming, now becomes incessant, and the matter ejected, which in the first instance was the natural contents of the stomach, appears now to be the effect of a morbid change having taken place in that organ. Hemorrhages from the nose and mouth are not infrequent. The patient is by turns sensible and delirious. Subsultus tendinum and coldness of the extremities now succeed, when the patient may be said to be struggling with Death, which unfortunately soon follows. These are the symptoms of the disease as it commences and proceeds on to a fatal termination in the greater number of cases, though it can scarcely be said that any of the symptoms which here mark the later stage of the disease are constant and invariable.

The symptoms of vomiting and delirium are very generally vicarious and the flavidity of the whole body is by no means so constant or attendant upon the disease as the yellowness of the eye. Indeed, the symptoms which generally distinguish it greatly differ in degree, and this difference is commonly found proportionate to the intensity of the combined causes.

I come now to consider the causes which have been found adequate to the production of this disease, at different times for years past, both in this country and in the West Indies. If we take a candid survey of the works of those gentlemen who have written professedly on the diseases of warm climates, we shall find demonstrative proof of its local origin wherever it made its appearance. If we look into the different medical publications of this country the result of our researches will be the same. Physicians of eminence in many parts of America have instituted inquiries on this subject, and the result of those inquiries have been what we might have expected from reasoning *à priori* on the nature of the disease. It is remarked by those physicians who have treated on this subject, that when it does appear it always succeeds great moisture in that season of the year in which the sun exerts its greatest influence, and although many of them contend for the specific nature of the disease, we observe in all their writings this remarkable coincidence laid down in proof that the one is necessary and the other indispensably requisite in the production of that vitiated state of the atmosphere, to which *yellow fever*, as it has appeared in the seaports of the United States and in the West Indies, is to be wholly attributed.

It would be needless for me to multiply authorities in support of the endemial origin of this disease. Dr. Rush, in his treatise on the Yellow Fever as it appeared in Philadelphia, in the year 1793, has placed this matter in a clear point of view as respects that place, and our own observations in the year 1805, in this city, perfectly coincide with those laid down by writers on the causes of fevers in warm climates, and if analogical reasoning may be admitted, we can no longer doubt its indigenous origin. The

banks of the Ganges, the Indus and the Nile are all visited by analogous diseases when the waters which inundated their respective countries have begun to subside and their muddy shores are exposed to the direct rays of the scorching sun; and the fatality of the disease in the Islands of Sumatra and Java is justly attributed to the same cause. In addition to this, the writings of Lind, Jackson, Mosely and others might be adduced to prove the absolute power of vegetable and animal decomposition to produce the most violent and dangerous febrile diseases.

Whether the vitiated atmosphere thus generated by the action of the sun upon animal and vegetable materials capable of decomposition be merely the predisponent or exciting cause of this disease I judge not necessary to answer, though I should suppose this will differ according to the situation of the patient previous to the invasion of disease. Any agent capable of inducing a great degree of debility may become a predisponent cause; accordingly excessive heat, fatigue consequent upon mental or bodily exertion, fear, grief, intemperance in eating and drinking, the application of cold, and the subduction of accustomed stimuli, are all laid down by authors as predisponent causes of the disease, though at the same time no person can doubt the capability of any one of these causes to excite the disease when operating upon predisposition already formed. From continued action the predisponent may become the exciting cause. Thus a vitiated atmosphere, independent of any other cause capable of being detected by our senses, may become, and I have no doubt does become, efficient to the production of yellow fever.

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2d. To obviate the occasional causes of fever.

3d. To prevent or remove the danger of the system falling into a state of great debility.

The first indication would be answered by—1st. Blood-letting; 2d. Mild cathartic medicines; 3d. Cool air; cool water externally applied and internally exhibited with acids; 4th. A temporary suspension of the exercise of the senses; 5th. Blisters applied to those parts most liable to be injured by the increased action of the arterial system.

I am well aware that the propriety of blood-letting in this disease has been much questioned, but I am very much inclined to think that the prejudice against this point of practice has arisen from the too general and promiscuous use of the lancet.

Those gentlemen who so strenuously oppose blood-letting are, notwithstanding, great advocates for the old sudorific plan of treatment. Now this sudorific plan with them is intended to answer the double purpose of eliminating from the system the morbid material which generates the disease, while at the same time it serves to moderate the action of the sanguineous system. If so, the event of both methods would be precisely the same; but as respects the operation of the remedies, in my view there would be an essential difference. In the one case the excitability of the system will be almost exhausted by the administration of medicines to force a perspiration, which can by no means prove critical, since the means used defeat the very end for which they are intended; whereas, in the other case, we observe that when venesection has been premised perspiration is almost the immediate consequence of the application of tepid bathing or even cool air and this perspiration will be found to be infinitely more beneficial to the patient than that induced by stimulating medicines and vinous drinks; since it is not followed by any considerable exhaustion of strength, it being the immediate effect of the subduction of heat, while in the other instance it is altogether caused by excessive stimulation, which we wish as much as possible to avoid.

results. On a patient reporting himself sick, if I made a diagnosis of yellow fever, I generally used to put him into a room by himself—give, first of all, *half a tumbler* of good olive or castor oil (I prefer the olive oil, however), with the juice of two or three good fresh juicy limes or lemons squeezed into it. Strip him of *all* his clothing, and put two very large, thick blankets completely around him, so that nothing but part of his face was exposed, and only so much of that as would be necessary for him to breathe with comfort; sit him on a cane-bottomed stool, or, better still, a stool or chair without any bottom at all, and envelop both the patient and the chair so thoroughly in the blankets that neither of them could be seen; then light a good sized double spirit lamp underneath the bottom of the chair and within the blankets, and in a few minutes I would have my patient obeying the first rule necessary in the treatment of yellow fever, viz.: *sweating profusely.*

If the fever went over 102° I would immediately commence and give my patient twenty grain doses of the sulphate of quinine every hour, until the temperature came down. During the sweating process, which I generally kept going for two or three, or even four hours, if the patients wanted a drink (which they always do) I used to give them hot orangade or lemonade. After the patient had stayed long enough at the sweating process, I would blow the lamp out, take him in the same blankets in which he had been, place him in bed at once, and put enough clothes on to keep the sweat glands going all the time. In some cases in which the sweating stopped I have taken the patient and put him through the same process again, but, of course, not kept him in as long as before.

In the second stage of this disease, the principal things to do are to watch the irritability of the stomach and try to control it, and then to look that your patient does not get into that much-dreaded state of collapse. In this stage the black vomit will probably engage your attention, and I only hope, gentlemen, that you will be successful in your treatment of it. In a great many cases, by a little judicious management you may bring your patient through it. I have found that if just after the patient has vomited you give him a good drink of champagne you will relieve him greatly; and at the same time I have had it stop it (the vomiting) at once. If your patient does not collapse, but goes on into the stage of recovery, he will come up hill very gradually, and you will find that you have to watch him very closely, to prevent his throwing the clothes off and catching cold; if he should get cold he may have a relapse, and I can assure you that is anything but a pleasant thing to treat. The duration of this disease is so uncertain that it is hard to lay down any rule.

How to disinfect ships, clothing and merchandise that come from infected ports, is a question that has excited quite a little attention of late. I think, from what I have been able to see, that the only thing that will really destroy the yellow fever germ is something that will penetrate every corner and crevice, piece and fibre—and the only thing that we have that will do this *thoroughly* is "*steam.*"

Dr. Henry M. Wells, a surgeon in the U. S. Navy, invented a little machine (which I will not attempt to describe here), but which, with the aid of steam, thr ows a solution of any disinfectant which you may choose to employ, and in a few minutes will so charge the air with the disinfectant that it will be impossible to breathe in it. Again, another good thing in this little machine, though it may do its work so thoroughly, it does not destroy or wet anything; and after using a disinfectant which has rather a disagreeable smell, in any dwelling house, or cabin of a ship or steamship, all you have to do is to put a small quantity of any good perfume in the machine, and in a few minutes your disagreeable odor has vanished. I believe it has been approved by the Navy Department.

Chlorine gas is used in a few of the quarantine stations; but, as far as I have been able to see, it does not do its work at all well, and only disinfects the upper portions of the ships, and not below at all. *Sulphur fumes* are used in very much the same way, and with very much the same result, in nearly all the quarantine stations; but I must make one exception, and that in favor of Dr. P. S. Carrington, who was in charge last summer of the Mississippi River Quarantine Station, near New Orleans. He took such pains and looked after the work so well, that the fumigation was not a farce, like in some other quarantine stations, but a genuine piece of work, well done, and the disinfecting fee, though rather high, was well earned—rather a rare thing in a political job. The patients in his hospital were well taken care of, and were the *whole time* under the care of a duly qualified physician, and *not entrusted to careless nurses;* and, in fact, all the doctor's arrangements were good; and the kind and gentlemanly way I was treated was so different from other quarantine stations, that I could only hope that the improvement might travel further north.

Cold.—It has been proved pretty thoroughly, in the case of the United States sloop of war "Plymouth," that if a ship has had yellow fever on board during the summer, and has been laid up and thoroughly frozen out all the next winter, the yellow fever germ will still live, and only lies dormant till perhaps the next summer, when, under favorable circumstances, the disease may rage again, as in the case cited, immediately on the ship being put into commission, it broke out again, and the ship had to be put out of commission.

BROOKLYN ANATOMICAL AND SURGICAL CLUB.

Stated Meeting, July 21st, 1879.

The President, Dr. L. S. Pilcher, in the chair.

VESICAL CALCULI: THEIR FREQUENCY IN SIAM.

Dr. Chas. W. Vrooman presented specimens of vesical calculi removed by him when in Chieng-Mai, Northern Siam, during the years 1872–73, as follows:

No. 1.—Two calculi and fragments, composed of phosphate of lime and triple phosphates in about equal proportions. Weight, 5 oz.—viz., larger stone, 2¼ oz.; smaller stone, 1¾ oz.; fragments, 1 oz. Patient male; age, 17 years; had suffered several years. Bladder hypertrophied. Operation lateral, followed by recovery.

No. 2.—Calculus composed of phosphate of lime and triple phosphates. Weight, 4 oz.; dimensions, 3x1¾x1½ inches. Foot-shaped. Circumference round instep, 5½ inches. Operation lateral. Patient died 14th day after from pyæmia. Stone broken during operation.

No. 3.—Calculus composed almost entirely of phosphate of lime. Weight, 1 oz., 2½ drs. Patient much emaciated, and died 16th day after from exhaustion. Operation lateral.

No. 4.—Small calculus removed from patient. Not analyzed, and no history of case kept.

No. 5.—Three small calculi removed from the urethræ of different patients, the largest one by perineal section and the others by forceps, after slitting the meatus.

Other vesical calculi were removed, but specimens were not kept, and no history of the cases preserved.

Dr. Vrooman accompanied the presentation of these specimens with the following remarks:

Siam has a population variously estimated at from three to five millions. I think the smaller number is more nearly correct. The majority of this people occupy the valleys of the Menam and its tributaries, the rest being distributed along the coast of the Gulf of Siam and the short streams which flow into it, or occupy the mountain region in the northern portion of the country, where the Menam and its tributaries have their origin. These valleys may be characterized as upper and lower, and are separated from each other by a range of mountains two or three hundred miles from the mouth of the river. I mention this conforma-

tion of the country because certain diseases are more frequent in one portion than another, and it is a question of interest whether any local cause for this exists. The upper valleys are probably about 800 feet above the sea level, while the lower valley is very little above the sea, and often, during high water after the rainy season, is entirely covered with water at high tide for nearly a hundred miles above the mouth of the river. In the upper valleys and among the mountains in the northern part of Siam, urinary calculi and goitre are much more prevalent in proportion to the number of inhabitants than in the lower valley. Chieng-Mai is the principal city of a province of the same name, located in one of these upper valleys. It has a population of about 30,000, with an adjoining population of 50,000 more within a radius of 20 miles. I was the first to practice medicine and surgery in that country, and comparatively few of the sick came to me for attendance, while of these not more than 6 or 7 would submit to an operation so formidable as that of lithotomy. During the time I was there cases of urinary calculi presented themselves almost every week. As nearly as I can remember, more than 2 per cent. of those applying to me for treatment were suffering from stone in the bladder.

To illustrate the comparative frequency of this disease in that country, I may say that during the past four years I have, in Brooklyn, examined an average of about 1,000 patients per year in dispensary and private practice, and have not met with a single case during that time; and twice only since I began practice in this city, in 1868, have I seen the disease here—once in the case of a patient operated upon clinically at the Long Island College Hospital by Dr. Pilcher, and once on a patient under the care of Dr. Wilde. I believe my experience here is similar to that of the majority of physicians in Brooklyn, so rarely does the disease occur here.

The following table, compiled from the "Medical Statistics of the Provost Marshal-General's Bureau," are of considerable interest in this connection. It gives the number of men examined in various localities during our late war, the number exempted from diseases of all kinds, and the number exempted because of urinary calculi:

Locality.	Examined.	Exempted.	Calculi.
Drafted, U. S., North.....	501,002	141,697	64
Recruits, " "	305,608	69,965	6
Drafted, N. Y. City.....	13,031	3,247	0
" Brooklyn.....	7.184	1,764	0
Berkes Co., Penn.....	2,395	906	7
Greene and Ulster Co's, N. Y.	5,341	1.530	6
2d Cong. Dist., Kent'y.....	1,144	285	4

These statistics do not give right conclusions, if we rely upon them

alone. Cases of calculi do occur, and, I believe, originate in New York and Brooklyn, and in many other portions of our country, which yield negative results, according to the statistics. Again, owing to the migratory habits of our people, cases which originate in one part of our country may be found in portions of the country where the disease seldom if ever has been known to originate. The fact is, that the disease is common in the region of the Blue Ridge and Alleghany mountains, and very rarely met with in the cities along our sea-coast. It is more prevalent in Northern Siam than in any part of our own country, and is also of very common occurrence in some parts of India and in the southern provinces of China.

Dr. Kerr, of Canton, China, who has operated for stone in the bladder more than 500 times in the hospital under his care there, says that although so frequently met with in the south of China, where it is mountainous, it very seldom occurs in the low, rich, alluvial country so densely populated, in the northern and eastern part of that country, or, at least, that no operations have been reported by European physicians there.

What local conditions exist in those parts of the world where calculi are most frequently found? I can only say, in answer to this question, that in northern Siam the water contains a great deal of lime and other salts; the country is mountainous and the rock limestone. This is also the case in other parts of India where calculi are abundant, in southern China, and in Pennsylvania along the line of the Blue Ridge mountains, and is probably so to a greater or less degree in every region where urinary calculi are most frequently met with. It is popularly believed that hard water, and especially lime water, is a cause of urinary calculi, and also of goitre.

Calculi composed of the phosphates and the oxalate of lime are, I believe, relatively more frequent in India than in America or Europe, while uric acid varieties largely prevail in cold, damp climates, where the people are liable to gouty or rheumatic affections.

Dr. Kerr called my attention to a case of preputial calculi in his hospital at Canton, and told me that he had operated as many as six times in one year upon patients thus affected. These concretions form within the prepuce when congenital phymosis exists, and he once removed over a hundred of these small stones from a single patient. They are of very rare occurrence in China, and are perhaps never seen here.

INTERNAL STRANGULATION OF ILEUM.

Dr. J. H. Hunt presented a specimen in which the following condition was present: In the peritoneal reflection from the ileum to the

ascending colon an aperture existed immediately adjacent to the point of opening of the ileum and colon; through this aperture a loop of intestine, consisting of the terminal 18 inches of the ileum, had slipped, had become tightly twisted upon itself, and was closely gripped by the edges of the aperture, which were tense, and the more unyielding by reason of the fact that the ileo-colic vessels made part of their structure. Specimen was accompanied with the following history, which had been obtained from Doctor F. W. Benson, in whose practice the case had occurred :

Male, aged 56 years, robust, by occupation a carpenter; while at work, during the afternoon of June 20th, 1879, was suddenly seized with severe and continuous pain in his bowels; at end of three hours was seen by his physician, who found that his pain was circumscribed, and referred to a point just above the umbilicus. No vomiting. Pain readily allayed by a full dose of morphine. During the two following days felt quite well, but kept quiet and recumbent; on the fourth day from the first attack, bowels not having moved meanwhile, the pain returned in the same locality, but more severely, and accompanied by vomiting. The matters vomited were simply the contents of the stomach, nor was any fæcal matter vomited throughout the course of his illness. Active cathartics and large enemata were given without effect. By the sixth day the abdomen had become tympanitic and the pain more general. Pain and vomiting continued unabated until the ninth day, when they ceased, and the patient felt so well that he sat up during the day. On the next day the pain and vomiting returned; no movement of the bowels; gastrotomy advised, but refused; toward night he became delirious, pain more intense; the succeeding morning he sank into collapse and died, his total illness having lasted about ten days.

At the autopsy, which was made twenty-four hours after death, there were found no signs of peritonitis, nor of other disease than that seen in the specimen presented.

HYPERTROPHY OF PROSTATE GLAND; HYPERTROPHY AND CHRONIC CATARRH OF BLADDER, URETERS AND RENAL PELVIS; TUBERCULAR DEGENERATION OF KIDNEYS; VESICAL AND RENAL CALCULI.

Dr. L. S. Pilcher presented the bladder and kidneys removed from a male, aged 67½ years, in which were presented the following conditions:

Prostate body greatly hypertrophied, affecting both lateral lobes uniformly; from the posterior section of the prostatic ring, between the two lateral lobes, projected into the cavity of the bladder a middle lobe, the size of a large walnut, which at the neck of the bladder served to divide the entrance into the urethra into two diverging passages, each an inch and a

half in length, which reunited in the prostatic portion of the urethra. The surface of this tumor was dimly lobulated, and showed points of excoriation from previous attempts at catheterization.

The bladder was contracted, and the muscular coat of its walls greatly hypertrophied; so that its fasciculi projected from the inner surface of the bladder in a trabecular network, like the columnal carneæ of the heart. In a sulcus at the base of the bladder, hidden at first by overlying and projecting muscular columns, was a small calculus, of the size of a small bean; near the apex of the bladder, and lying free in its cavity, was a larger calculus, of the size of an almond. These have been determined to be composed chiefly of phosphate of lime.

The cavity of the bladder was filled with offensive muco-pus, and its mucous membrane in a state of chronic catarrhal inflammation.

Both ureters were dilated to the size of a little finger, uniformly throughout their length; their walls thickened, their mucous membrane swollen and the subject of catarrhal inflammation; their cavities contained muco-pus; in the left ureter were several small collections of fine mortar-like calculi.

Both kidneys, in their gross appearance, were somewhat enlarged; their outer surface presenting occasional yellowish nodules and serous cysts; the pelves were somewhat dilated; the calyces very much so, at the expense of the pyramids. Offensive muco-pus filled the cavities; and in some of those of the left kidney were collections of the mortar-like concretions, adhering to their walls, of the same character as before noted in the ureter. None were found in the right kidney.

Dr. J. H. Ray, in whose practice the case had occurred, then detailed its history as follows :

Mr. Seth Bradford, 67 years of age, a printer by trade, was under the care of Dr. Ray during the four months immediately preceding his death. For a period of seven years he had been suffering from urinary troubles, for the twenty-eight years preceding which he had enjoyed perfect health. His history was one of repeated attacks of retention of urine, for the relief of which he was treated by gentlemen eminent in that specialty both in Brooklyn and New York. During the last two years he had been under treatment for vesical catarrh; had been kept comparatively comfortable, though never free from the mucous discharge.

About three months previous to coming under the care of Dr. R., he was persuaded by friends to put himself under the treatment of a prominent homœopath of Clinton Avenue, who made a diagnosis of *diabetes,* ordered him to bed, and forbade the further use of the catheter or of irrigations of the bladder. From this time he began to run down

rapidly. On the 2d of March, 1879, when Dr. R. first saw him, he was much prostrated, and his urine was dribbling away from him constantly day and night, with a desire to urinate every ten or fifteen minutes; his urine was extremely offensive; systematic catheterizations and irrigations of the bladder soon relieved the most distressing of his symptoms; he was enabled to retain his urine from two to three hours, and generally would not have to rise at night more than three or four times. From two to three weeks before his death he began to complain of pain in his back and slight œdema of the feet, and the skin began to gradually assume a yellow, waxy hue. He died early in July, from exhaustion, following symptoms of nephritic colic.

During his illness, at varying intervals, he had voided small urinary calculi. Careful examinations had been made for the presence of vesical calculi, but none had been detected. All the physicians who had seen him assured him that his kidneys were perfectly healthy; and it is one of the points of greatest interest in this case, that so great kidney lesions should have existed with such absence of symptoms pointing thereto.

[The following paper on YELLOW FEVER, written by Dr. John Carpenter, the first Treasurer and one of the original founders of the Medical Society of the County of Kings, was read at the August meeting of the Society, by Dr. C. H. Schapps, by whom it has been preserved. The records of the Society do not show when the paper was originally presented.]

YELLOW FEVER.

BY JOHN CARPENTER, M.D.

DISSERTATION.

MR. PRESIDENT AND GENTLEMEN:

In compliance with an ordinance of this Society, I now offer a few remarks upon a disease till lately but little known in this country, the nature of which we have unfortunately been experimentally taught at the expense of the lives of many of our most valuable citizens.

The subject of this paper is one which has afforded matter of considerable speculation to all classes of the community, but particularly to physicians, who, at the present day, greatly differ, both as it respects the origin and treatment of *yellow fever*.

This disease is thus marked in its invasion, progress and termination: It is ushered in by a great degree of languor, listlessness, want of recollection and disinclination to all kinds of active exertion, to which soon succeeds the febrile shivering, which again,

having continued an indefinite period of time, is followed by an intense degree of heat, quickened and laborious respiration, pulse for the most frequent, full, hard and throbbing, skin dry, tongue whitish and moist, bowels generally costive, great depression of the precordia, attended also with acute pains of the head, back and loins, with a suffusion of the whole countenance, but particularly of the eyes. In this state of the disease the patient is restless, sleeps little, and awakes without being refreshed; the thirst also from the first invasion of the disease being excessive.

These symptoms, if not relieved, only prove to be the percursors of another set of symptoms infinitely more dangerous, and to which the assistance of the physician can afford very little relief. The pulse sinks, becomes weak, very frequent, and often intermittent. The state of the tongue is infinitely more alarming, having changed from a whitish color to one almost approaching to black. The redness of the countenance generally, and eyes in particular, is now followed by a yellow color. The whole body often takes on the same appearance. The vomiting, which at first was by no means very alarming, now becomes incessant, and the matter ejected, which in the first instance was the natural contents of the stomach, appears now to be the effect of a morbid change having taken place in that organ. Hemorrhages from the nose and mouth are not infrequent. The patient is by turns sensible and delirious. Subsultus tendinum and coldness of the extremities now succeed, when the patient may be said to be struggling with Death, which unfortunately soon follows. These are the symptoms of the disease as it commences and proceeds on to a fatal termination in the greater number of cases, though it can scarcely be said that any of the symptoms which here mark the later stage of the disease are constant and invariable.

The symptoms of vomiting and delirium are very generally vicarious and the flavidity of the whole body is by no means so constant or attendant upon the disease as the yellowness of the eye. Indeed, the symptoms which generally distinguish it greatly differ in degree, and this difference is commonly found proportionate to the intensity of the combined causes.

I come now to consider the causes which have been found adequate to the production of this disease, at different times for years past, both in this country and in the West Indies. If we take a candid survey of the works of those gentlemen who have written professedly on the diseases of warm climates, we shall find demonstrative proof of its local origin wherever it made its appearance. If we look into the different medical publications of this country the result of our researches will be the same. Physicians of eminence in many parts of America have instituted inquiries on this subject, and the result of those inquiries have been what we might have expected from reasoning *à priori* on the nature of the disease. It is remarked by those physicians who have treated on this subject, that when it does appear it always succeeds great moisture in that season of the year in which the sun exerts its greatest influence, and although many of them contend for the specific nature of the disease, we observe in all their writings this remarkable coincidence laid down in proof that the one is necessary and the other indispensably requisite in the production of that vitiated state of the atmosphere, to which *yellow fever*, as it has appeared in the seaports of the United States and in the West Indies, is to be wholly attributed.

It would be needless for me to multiply authorities in support of the endemial origin of this disease. Dr. Rush, in his treatise on the Yellow Fever as it appeared in Philadelphia, in the year 1793, has placed this matter in a clear point of view as respects that place, and our own observations in the year 1805, in this city, perfectly coincide with those laid down by writers on the causes of fevers in warm climates, and if analogical reasoning may be admitted, we can no longer doubt its indigenous origin. The

banks of the Ganges, the Indus and the Nile are all visited by analogous diseases when the waters which inundated their respective countries have begun to subside and their muddy shores are exposed to the direct rays of the scorching sun; and the fatality of the disease in the Islands of Sumatra and Java is justly attributed to the same cause.

In addition to this, the writings of Lind, Jackson, Mosely and others might be adduced to prove the absolute power of vegetable and animal decomposition to produce the most violent and dangerous febrile diseases.

Whether the vitiated atmosphere thus generated by the action of the sun upon animal and vegetable materials capable of decomposition be merely the predisponent or exciting cause of this disease I judge not necessary to answer, though I should suppose this will differ according to the situation of the patient previous to the invasion of disease. Any agent capable of inducing a great degree of debility may become a predisponent cause; accordingly excessive heat, fatigue consequent upon mental or bodily exertion, fear, grief, intemperance in eating and drinking, the application of cold, and the subduction of accustomed stimuli, are all laid down by authors as predisponent causes of the disease, though at the same time no person can doubt the capability of any one of these causes to excite the disease when operating upon predisposition already formed. From continued action the predisponent may become the exciting cause. Thus a vitiated atmosphere, independent of any other cause capable of being detected by our senses, may become, and I have no doubt does become, efficient to the production of yellow fever.

Treatment.—From the consideration of the symptoms of this disease in all its different stages, the first indication which would present itself would be to moderate the excessive excitement of the system.

2d. To obviate the occasional causes of fever.

3d. To prevent or remove the danger of the system falling into a state of great debility.

The first indication would be answered by—1st. Blood-letting; 2d. Mild cathartic medicines; 3d. Cool air; cool water externally applied and internally exhibited with acids; 4th. A temporary suspension of the exercise of the senses; 5th. Blisters applied to those parts most liable to be injured by the increased action of the arterial system.

I am well aware that the propriety of blood-letting in this disease has been much questioned, but I am very much inclined to think that the prejudice against this point of practice has arisen from the too general and promiscuous use of the lancet.

Those gentlemen who so strenuously oppose blood-letting are, notwithstanding, great advocates for the old sudorific plan of treatment. Now this sudorific plan with them is intended to answer the double purpose of eliminating from the system the morbid material which generates the disease, while at the same time it serves to moderate the action of the sanguineous system. If so, the event of both methods would be precisely the same; but as respects the operation of the remedies, in my view there would be an essential difference. In the one case the excitability of the system will be almost exhausted by the administration of medicines to force a perspiration, which can by no means prove critical, since the means used defeat the very end for which they are intended; whereas, in the other case, we observe that when venesection has been premised perspiration is almost the immediate consequence of the application of tepid bathing or even cool air and this perspiration will be found to be infinitely more beneficial to the patient than that induced by stimulating medicines and vinous drinks; since it is not followed by any considerable exhaustion of strength, it being the immediate effect of the subduction of heat, while in the other instance it is altogether caused by excessive stimulation, which we wish as much as possible to avoid.

But the greatest objection alleged against this practice is *that it induces a degree of debility very dangerous to the patient, and very difficult to remove.*

A question might here be asked, which experience only must answer, "Which of the aforementioned remedies induces the greatest degree of exhaustion?" and here, as in all other medical disputations, the comparative merits of each mode of treatment should be settled by the comparative success of each practice.

It has been ascertained from the dissection of persons who have died of this disease, that in very many instances some of the viscera were congested and effusion had taken place in others; as also that the membrane immediately investing those organs had taken on an inflammatory appearance. Surely such circumstances justify the propriety of blood-letting, and call loudly for the exercise of the lancet as an essential point of practice. In thus speaking of blood-letting, I would not be understood as approving it in all cases of this disease; I only wish to recommend it to more general use, and to check, if possible, that torrent of obloquy which has been so illiberally poured upon those physicians who have given in to this practice. In evacuating the first passages, it will be proper always to have in view the state of the stomach, whether it be sufficiently retentive to admit of the exhibition of stimulant medicines; if it be not, we should by no means hazard the administration of a remedy which would tend to invert its action, the inverted action of this organ being one of the most formidable symptoms with which we have to contend; notwithstanding which caution it would be proper, in the first stage of the disease, before the stomach is materially affected, to exhibit, in addition to the neutral salts usually prescribed, calomel, in proper doses, which will then answer the double intention of evacuating the stomach and intestines, at the same time that it would relieve the disease by inducing a new irritation, and, by increasing the action of the absorbent system, free the patient from the dangerous consequences of congestion or effusion in any vital organ. If the second intention of the medicines cannot be answered in this way, it may be used in the manner recommended by Mr. Clare, and also externally applied with great advantage. The propriety of mercurial medicines in this disease, and the great safety with which they may be administered in its most desperate forms, will appear from the practice of Dr. Chisholm, in the fevers of Grenada, and also from the accounts given of it by the most eminent physicians in this country.*

In addition to the mercurial medicine already named, it would be proper to exhibit such saline remedies as would relieve the stomach at the same time that they proved mildly eccoprotic and co-operated with the bath in producing perspiration, and the medicine best calculated for this purpose will be found to be the citrate of potash, given in its forming state (the effervescing draught of Reveruss), the carbonic acid air extricated during the formation of this salt in the stomach being very grateful to the patient and very effectual in checking the disposition to vomiting. The use of mild enemata throughout the whole course of this disease, after the first evacuation has been premised, is a point of practice very much and very properly insisted on. The superior advantage of keeping the bowels pervious by this method, rather than by the exhibition of cathartic medicines when the stomach is so remarkably irritable and irretentive, will appear to every person who is the least conversant with the disease under consideration.

As a third means of moderating the inordinate action of the arterial system, we know none better calculated than the admission of cool air to the surface of the patient, the exhibition of cool subacid drinks, together with the use of cold bathing. All authors, with great propriety, agree in recommending to induce perspiration in all febrile diseases, as a certain means by which to free the system from that extraordinary quantity of heat

* Rush Brown.

which is the essence of the disease, and from actual observation it has been ascertained that there is no method which more certainly produces this effect than bathing, which has this decided advantage over the exhibition of internal remedies, that its temperature can always be suited to the state of the patient, and the manner of its application may be varied as circumstances shall at any time seem to require; whereas the state of the patient's stomach often renders the use of internal medicines unavailing, and very frequently injurious. It has been found by experiment that it may be used with success in all states of fever except at its immediate invasion, or when the patient suffers in the cold stage of the paroxysm, and so fully satisfied was Dr. Jackson of its efficacy, that he insists very much upon its use in the fevers of Jamaica; and speaking of fever, particularly as it occurred at Savanna La Mar, he has these words: "It should be used with freedom and with boldness, and it is the remedy on which we must principally depend." Dr. Rush believes it to be a very powerful remedy in fevers, from witnessing its efficacy in other diseases, and found upon experiment that, judiciously applied, it answered his most sanguine expectations, and that, blood-letting excepted, no remedy was more effectual in reducing the excessive excitement of the system; and Dr. James Currie, of Liverpool, has clearly established its safety, and confirmed its celebrity by repeated experiments in all cases of fever which came under his observation.

From the dissection of persons who have died of this disease, it has been ascertained that the vessels of the stomach in some instances, those of the brain in others, and those of the liver in many, have been distended with blood, and have put on the appearance of parts having undergone inflammation. In such cases the application of blisters to those particular parts would have been advisable, and from the tendency which this desease shows to spend its force upon one or other of these organs by inflammation and its consequences, it would, in my opinion, not only be advisable, but really judicious and successful practice, to apply blisters in the early stages of all cases of this disease, before the brain, stomach or liver becomes materially affected, at the same time carrying the application to the point of ulceration, that they may serve as extensive issues. But in the more advanced stages of this fever likewise the application of cantharides, with a view to stimulate the patient, and render his system more alive to the operations of other remedies, should not only be admitted, but insisted on as an essential part of the cure; and for this purpose it is not requisite that it should vesicate the part to which it is applied; we only wish to avail ourselves of its stimulus, and its action as a rubefacient fully answers our purpose.

The treatment which shall answer the second general indication, viz.: the avoiding the occasional causes of fever, may be laid down in very few words. For this purpose the patient should be immediately removed from such situations as are favorable to the generation of disease.

The apartment in which he is lodged should be as spacious, cleanly and well ventilated as possible. If this be impracticable the utmost possible care should be taken to correct the atmosphere in which the patient is immersed, and to cool it by artificial means. The chamber of the patient should be in some measure covered with powdered quicklime. The bed and body linen of the patient should be frequently changed.

The secretions and excretions should be kept in equilibrio, lest by their retention in the one case they should create disagreeable irritations, or by their profuse evacuations, on the other hand, they should induce a dangerous debility. The excrementitious matters of the patient should be rapidly and carefully removed from his room. The state of his stomach and bowels should be strictly attended to and plentiful dilution persisted in, being careful that nothing be taken into the stomach as food that cannot be easily assimilated by its digestive powers. To these may be added the injurious ap-

plication of cold as a point concerning which we should be very solicitous. By attending to these circumstances we shall in a great measure obviate the occasional causes of fever.

After having answered the two first indications, procured a solution of the fever and guarded the patient from the danger of a relapse, as far as that relapse shall depend upon the application of usual causes, I come now to the last general indication to prevent or remove the danger of the system falling into a state of great debility.

The operation of medicines in addition to disease must certainly have greatly exhausted the natural vigor of the patient. To prevent this exhaustion of strength being over-proportionate to the state of previous febrile excitement requires judicious treatment in the first stages of the disease, and therefore would most properly be referred to the first indication. The removal of this state of debility is that which more particularly appertains to this last proposed part of the cure, upon which it is the more unnecessary to dwell, since it is that part of the treatment of all fevers which is above all others the best understood. I shall only observe that the exhibition of tonic medicine to patients convalescent from this disease I believe is not so generally necessary as has been generally supposed, the recovery of persons having once commenced being in this, as in most other acute diseases, remarkably rapid.

The administration of bark, wine, steel, cold bathing, etc., etc., though they may be admitted in many cases as being productive of benefit to patients, may, generally speaking, be dispensed without incurring any hazard, and the restoration of the patient's health may be safely trusted to the exhibition of a nourishing diet of easy digestion, consisting chiefly of farinaceous food, together with the use of milk (which is extremely grateful to most patients at this period), moderate exercise in the open air, and the regimen usually observed by patients convalescent from febrile disease.

Ἀσκληπιὸς ὁ Σωτὴρ

Χαρμα μέγ' ανθρωποισι, κακων θελκτῆρ' οδυναων.

Hymns of Homer, No. XVI.

PROLIFERATIONS.

——The Head of Tænia.—The editor of the *Richmond Med. Monthly* reports the cure of an unusually obstinate case of tape-worm. He had attacked it with turpentine, kooso, pomegranate, male fern, etc., etc., but never dislodged the head. He next tried Inloe's emulsion of fresh male fern oil. After two doses the head was expelled. No return of symptoms.

——Anæsthetic Honors.—The presentation by Mr. H. L. Stuart, of Carpenter's portrait of Dr. Long, who was believed by many to be the discoverer of anæsthesia, to the Alumni of the University of Georgia, to be placed in the Capitol, took place in the Hall of the House of Representatives, in presence of the Governor, Mrs. Long and family, Senators and members, Judges, the medical profession, the Alumni, the Mayor and members of the Council of Athens and many others. Senator Gordon made the presentation speech and B. C. Yancey the reception speech.

——The bad taste of the compound tincture of iodine is said to be best disguised by its administration in molasses.

——Dr. Charles Rowland died at his late residence, 149 Henry Street, at the age of 79 years. He had been in practice here during the greater part of fifty-three years. He was one of the oldest practitioners in the county, having joined the Medical Society in 1835. He was a native of Fairfield, Conn., and a graduate in medicine from the Medical Institution of Yale College in 1824.

——The National Board of Health issued a circular, date of July 12th, in which it acknowledges, in gingerly phrase, the possible classification of yellow fever as a filth disease. "It is also prudent," it says, "to assume that the growth and reproduction of this cause (specific particulate) is connected with the presence of filth, *in the sanitary sense of the word*, including decaying organic matters and defective ventilation, as well as of high temperature" (*sic*). This admission nullifies many a long argument in favor of quarantine, indulged in at the Richmond Convention last November.

——Guy's Hospital Reports, 3d Series, Vol. XXIV. London: J. & A. Churchill. Price, 7s. 6d. 1879. The editors of this volume, H. G. Howse, Esq., and Fred. Taylor, M.D., have sustained the high standard of their former issues. The book contains 500 pages, and is copiously illustrated. The papers of Dr. Goodhart and Mr. Howse on Surgical Scarlatina will awaken much interest, as also that of Dr. Mahomed developing the use of the sphygmograph in chronic Bright's Disease. Dr. Jewett's paper, in these Proceedings, on the late Dr. Groux, is cited in a paper on the different modes of dying, at p. 352. This last paper alludes to cases of sudden death in acute peritonitis and other abdominal affections, tracing the sudden death to a "fatal shock" to the mesenteric nerves, arresting abruptly the action of the heart. This article does away with death beginning at the brain, leaving two organs as the portals of death—the lungs and heart; by the lungs there are two modes: "sudden paralysis" and gradual asphyxia; by the heart, the mode called syncope, of which there are such modifications as anæmia, hemorrhage and asthenia.

——The Regular Monthly Meetings of the Medical Society of the County of Kings are held at 8 P. M., on the third Tuesday of each month, at Everett Hall, 398 Fulton Street.

The September meeting will be held on the 16th, at which there will be presented the following paper:

A case of Popliteal Aneurism cured by Esmarck's bandage, by Dr. J. N. Freeman.

Administration of Anæsthetics, by Dr. H. F. Williams.

By vote of the Society, the discussion on Yellow Fever was made a special order for a portion of the September meeting.

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R. M. Wyckoff,	A. Mathewson,	F. W. Rockwell.

Chap. XI, Art. 2, of By-laws: "Any Member elected as Delegate to the Medical Society of the State of New York, who shall be unable to act as Delegate during two successive years, shall be considered to have vacated his position as Delegate."

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PROCEEDINGS

OF THE

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

STATED MEETING, SEPTEMBER 16, 1879.

NOTES OF A CASE OF POPLITEAL ANEURISM SUCCESSFULLY TREATED BY ESMARCH'S BANDAGE, WITH REMARKS.

BY J. N. FREEMAN, M.D.

Wm. Smith, aged 68; native of Ireland; farmer; came to this country 43 years ago. Was sent from Attleboro', Mass., and admitted to St. John's Hospital June 20th, 1879. He was tall, spare and very anæmic, with a large pulsating tumor filling the whole popliteal space of the right leg, and bulging out on both sides of the knee.

This tumor was first noticed four months previously, coming without any assignable cause. It had grown rapidly, and was now giving him much pain, and had entirely disabled him from using that limb.

He was directed to have iron and bitter tonics, and rest in bed, till the 24th June, when, deeming his case unsuited to ligature of the femoral, on account of the evidently unhealthy condition of his heart and arteries, I determined to attempt the cure by the elastic bandage—by Reid's method.

In the presence of the hospital staff and a few invited friends he was placed under the influence of ether, and I then encased the limb in a woolen bandage, and applied an Esmarch's bandage tightly from the toes to the

tumor; then passed the bandage up in front of the knee to the upper edge of the tumor, and tightly around the thigh to the upper part of the middle third. At the upper edge of the bandage I applied a thick rubber tubing twice around the thigh, and removed the bandage. The limb appeared bloodless, and all pulsation had ceased in the aneurismal sac, which was distended with blood.

He was kept under ether one hour and twenty minutes, when the elastic ligature was removed, and some pulsation returned, though much diminished in force, and readily controlled by digital pressure over the femoral artery. This was kept up steadily one hour and five minutes longer, when, on again examining the tumor, it was found solid and free from pulsation.

He complained of so much pain that a hypodermic injection of one-fourth grain of morphia was given, and repeated within an hour.

Digital pressure over the femoral was continued as a precautionary measure for three and three-quarters hours longer, or till 6:30 P. M.

June 25th: Has had a good night's rest, and is quite comfortable. The tumor is solid, but has some pulsation, easily controlled by digital pressure over the femoral, which I kept up for half an hour, and the pulsation never returned.

The leg was kept enveloped in flannel, and the warmth maintained by cans of hot water. The tumor gradually diminished in size, and the circulation returned to the extremity, and he was allowed to get up on the 9th of July, and was discharged, cured, on July 29th.

This case is brought before the Society as the first in which the elastic bandage has been used in our city for the cure of aneurism, though several cases have been reported by our English brethren.

No excuse is needed for bringing forward a new, if more simple and successful, means of curing so formidable a disease, and one which has occupied so much of the attention of the best surgeons during the last century.

All the methods of treatment have for their object the obliteration of the artery where the tumor is situated, and if this can be done by the elastic bandage, producing a firm coagulum in a few hours, or even in the fraction of an hour, and without liability to the dangers which follow ligation of the artery and the other means that have been employed, it is well worthy of attention.

In order to get a clear idea of the manner in which a cure is effected, and the conditions necessary for success, I have condensed the reports I have found recorded.

The first recorded case in which this treatment was used, was that of Staff Surgeon Walter Reid, M.D., R. N., at the Royal Naval Hospital, Plymouth, Sept. 11th, 1875.

This was a case of left popliteal aneurism of considerable size and strong pulsation.

The limb was bandaged with the elastic roller from the toes to the junction of the middle and lower third of the thigh, being applied lightly over the tumor, so as not to compress it. The elastic tubing was then wound around the limb above the highest turn of the bandage, which was now removed. The entire circulation below the tubing was found arrested. The aneurism was of its usual size, and pulseless. After fifty minutes, on account of the severe pain, the tubing was removed, and the collateral circulation was re-established; but no pulsation returned to the tumor.

The second case was by Mr. Wagstaff, at St. Thomas' Hospital, Sept. 2d, 1876.

This was a right popliteal aneurism of over four months' standing. Esmarch's bandage was applied tightly from the foot to the tumor; lightly over that, and tightly to within three and a half inches of Poupart's ligament. Bandage fastened with pins and kept in place fifty-five minutes.

Before it was removed a tourniquet was placed on the artery, and when the tumor was examined at the end of another hour all pulsation had ceased, and did not return.

The third case was by Mr. Fred Ashton Heath, at the Manchester Royal Infirmary, Oct. 17th, 1876.

Left popliteal aneurism, the size of an orange, of three weeks' standing.

Bandage carefully applied from the toes up, until the lower part of the popliteal space was reached. The patient was then directed to stand, to allow blood to flow into the aneurism, and the bandage was then lightly passed over it, a layer of cotton wool intervening. The roller was applied above the knee to within three inches of Poupart's ligament, and then secured. The patient complained of great pain, and one-third of a grain of morphia was given subcutaneously.

After one hour Signoroni's tourniquet was applied to the femoral artery, and Esmarch's bandage slowly removed. Tumor hard and no pulsation. In one hour longer all pressure was removed, and no pulsation ever returned.

The fourth case was by Mr. Thomas Wright, at the General Hospital, Nottingham, Dec. 31st, 1876.

Femoral aneurism in Hunter's canal, size of an orange. Had existed six months.

Elastic bandage applied from the toes up; lightly over the tumor and tightly above on the thigh; the strong rubber tourniquet encircling the limb at its upper edge. Severe pain was experienced, and opium given for its relief.

In two and a quarter hours the tourniquet was removed, and the bandage one hour later, when the tumor was found firm, with a very little pulsation at the highest part of the aneurismal dilatation. A bag of shot was kept on the artery to control the circulation, and the next day all pulsation had ceased. Towards evening pulsation returned and was felt feebly to Jan. 4th, when the case was practically cured.

The fifth case was by Mr. Thomas Smith, of St. Thomas' Hospital, March 17th, 1877.

Right popliteal aneurism, size of a hen's egg, of four weeks' standing.

Elastic bandage applied from toes to groin, except over the tumor, and thick rubber tubing applied at upper edge of bandage. Bandage and tubing retained on the limb one hour. Pain controlled by chloroform. Then the Italian tourniquet was applied for two hours longer, when the tumor was found solid and much diminished in size.

The sixth case was by Mr. Tyrrell, of the Mater Misericordia Hospital, Dublin, April 24th, 1877.

Left popliteal aneurism of six weeks' standing. Measured four and a half inches from above downwards, and five and a half inches across.

Elastic bandage and tourniquet applied and kept on fifty minutes. The tumor was diminished in size, was hard and globular, and had a very slight pulsation. Digital compression was kept up two hours, when the tumor was found to be absolutely pulseless.

The seventh case was by Mr. Manifold, of the Liverpool Northern Hospital, Aug. 17th, 1877.

Popliteal aneurism size of an orange, first noticed sixteen days before.

Esmarch's bandage, carried rapidly from foot to upper part of thigh, passing lightly over the aneurism. Rubber tubing applied at top of bandage, and kept on three-quarters of an hour, during the last thirty minutes of which he had ether. The sac began to get firmer, and continued to do so until the bandage was taken off, when the pulsation returned, but the solid feeling remained.

Two days after, as the pulsation continued, though to a less extent, the elastic bandage was re-applied for the same time as before; but pulsation continued when it was removed. The leg was flexed to a moderate extent the next day and the tumor continued to get firmer. By Sept. 8th he was quite cured.

The eighth case, by Dr. Campbell, at the Liverpool Northern Hospital, September 5th, 1877, unsuccessful.

Popliteal aneurism, similar in appearance to the last case. Bandage applied in the same way, and kept on for fifty minutes; but no consolidation took place. The bandage was repeated three times, at intervals of some days, and tourniquets were also kept on; but without the slightest effect on the aneurism.

On October 15th Dr. Campbell tied the femoral, after which there was no return of the pulsation.

Ninth case—by Herbert W. Page, St. Mary's Hospital, September 21st, 1877. Unsuccessful.

Popliteal aneurism. Limb bandaged below and above the tumor, and rubber tubing passed around upper part of thigh. "This done, the tumor was at once gently yet thoroughly manipulated." Pain became so intolerable that in twenty minutes chloroform was given. The bandage and ligature were kept on an hour and a half, and, before removing them, a tourniquet was placed on the femoral to control, but not arrest, the circulation. The tumor seemed firmer. On the following morning the tourniquet was removed, and the tumor, though feeling firmer, beat as much as before.

September 26th: Bandage and tube were again applied for an hour, and tourniquet on their removal. This application was followed by marked change in the nature of the pulsation. It could with great difficulty be felt, and was decidedly firmer. In six hours there was no change in this state. The next afternoon, however, when the tourniquet was removed, the pulsation had resumed its original character.

October 3d: Esmarch's bandage again applied for an hour. The tumor once more felt firmer; but, when the tourniquet was removed on the 4th, the pulsation was stronger than on the 2d.

October 10th: The femoral was tied, with a successful result.

Tenth case—by Mr. Croft, at the St. Thomas Hospital, November 8th, 1877.

Left popliteal aneurism, as large as an orange. Elastic bandage applied from toes to lower limit of aneurism; the patient then stood for nearly a minute, and while erect the bandage was applied from the upper edge of the aneurism to near the groin, and securely fastened.

In an hour, as the patient was in great pain, the bandage was slowly taken off, the lower one first. When the upper one was removed, pulsation recurred in the swelling,

but not so strongly as before. Digital pressure was at once applied. In less than six hours pulsation had ceased and did not return.

Eleventh case was by Mr. Cornish, at the Taunton and Somerset Hospital, December 2d, 1877.

Traumatic aneurism of anterior tibial artery. Esmarch's bandage applied from the toes to the tumor; the patient then stood, to fill the tumor with blood, and the bandage applied above it to middle of thigh, and the thick rubber tubing fixed above it Bandage removed in one hour. No further pulsation.

Twelfth case—by Dr. G. B. Ferguson, at the Cheltenham Hospital, March 6th, 1878.

Right popliteal aneurism, large as hen's egg.

After ten days' preparatory treatment in bed, with ten grains iodide of potassium three times a day, treatment was commenced by the simple application of a rubber cord of the thickness of the little finger, twice around the circumference of the junction of the middle and lower thirds of the thigh, the ends of the cord being secured just so tightly as to stop the aneurismal pulsation. No preparatory elastic bandaging of the limb. The foot and leg were enveloped in cotton wool. Then the mode of procedure was as follows:

One hour of compression—contraction of aneurism, but no solidification.

Two hours and twenty minutes of digital compression—no further change.

Half hour of compression—notable solidification, but still appreciable pulsation.

One hour of digital pressure—no further change.

Half hour of compression—aneurism much shrunk and very hard, still faintly pulsating.

One hour and twenty minutes of digital pressure—no further change.

One hour of compression—pulsation dubious.

One hour of digital pressure—positively no further pulsation.

The active treatment thus occupied between eight and nine hours, the cord having been applied for three hours in all, being removed as often as the comfort of the patient required.

These are all the cases which I have found recorded in full up to the beginning of this year. Though at the meeting of the London Clinical Society, held on the 13th of December, 1878, the following gentlemen reported their experience with this method :

Mr. Hutchinson reported two cases—both successful.

" T. Smith " one case— "

" Morant Baker " " "

" Maunder " two cases—both failures.

" Barwell " " one failure, one success.

" Paige " one case— "

" Lane " " "

" Bryant " " "

" Norton " " "

" McDougal " " cured.

I also find reference to an unsuccessful case by Mr. Bradley in 1876.

During this year a successful case is reported by Mr. Hewetson at the York County Hospital.

All the above cases were treated by English surgeons.

The only case I have found in which this mode of treatment has been tried on this side of the ocean, was in Bellevue Hospital, January 19th, 1879. This was a very large diffuse popliteal aneurism of twenty-four days' standing, caused by a severe strain. This was not successful. Three days later the elastic bandage was applied and the tumor cut down upon, and the artery found ruptured in two places just below Hunter's canal. This case terminated fatally.

This makes, in all, twenty-six cases of aneurism treated by Esmarch's bandage (including Dr. Ferguson's case, where only the elastic cord was used).

In fifteen of these entire success was obtained and eleven were failures.

Two of the cases cured have been examined post mortem. In each the shrunken sac was found filled with a dry granular clot, not laminated fibrin, and the vessel on which it was situated was obstructed by organized thrombus.

The speedy coagulation of the blood contained in the tumor seems to be the result of entire stagnation and the death-like condition of the whole limb, the collateral circulation being cut off as it cannot be by any other means.

In some, at least, of the failures, that condition was not continued long enough for the clot to become solid, and when the circulation was allowed to return in full force, the soft clot was washed away. The best means to prevent that result, is to keep up digital pressure for a sufficient length of time for the clot to become firm.

The simplicity and safety of this method will recommend it in all cases when it can be applied, especially as in case of failure no injury is done, and resort can afterwards be had to any of the other means of cure.

ADMINISTRATION OF ETHER.

BY H. F. WILLIAMS, M.D.

It is conceded that for general surgical purposes ether is the safest anæsthetic known. It is not the object of this paper to further discuss this fact. I desire to show what probably is known to all of us, but what many seem to have forgotten. First, that it is the most *disagreeable* anæsthetic when carelessly and thoughtlessly administered. Secondly, that to the careless administration of ether are due some adverse surgical results. Thirdly, a few practical suggestions concerning its administration, which will render it less objectionable.

Three times in my life I remember to have been nearly suffocated. Once when a boy by being held under water by some hostile companions; again when attempting to remove some articles of furniture from a room filled with smoke, in a burning building; and about six years since by an ether cone, in the hands of some brother physicians, who anæsthetized me experimentally. I assert now, with all candor, that of the three experiences, the last was the most suffocatingly complete. I can remember distinctly the sweet relief that approaching unconsciousness afforded, and during that period of dreaming that I was dead, and of my desire to communicate to my friends the fact that they had strangled me.

My various flights of agreeable fancy were marred by the sole regret that I could not return to life and teach my companions the proper manner to administer ether. I have reason to believe that my experience is similar to other patients in far too many instances; nor is this strange, when men from positions of influence advocate the close application of the inhaling cone, purposely obtaining the toxic effects of carbolic acid. This is suffocation, and suffocation is extreme suffering.

If the question was asked of any member of this assembly, Do you suffocate your patients while administering ether? we should probably receive an indignant answer; yet I venture to assert that we have all done so. And when we look for a moment to the prevailing customs, we will be forced to admit that we are still doing so. It is seldom that we hear any protests from the patients, excepting during their moments of agony, when their pleadings and struggles are ruthlessly considered and treated as the proper effects of the intoxicant. Upon return to complete consciousness the patient may express a wholesome disgust of the ether, but attending circumstances are likely to prevent any energetic reference to the subject.

What are these customs? First, it is too general to select the youngest man, and necessarily the man with the least judgment, for administering the ether—who, if he be a graduate of our metropolitan colleges, will at once demonstrate the teachings of his professors, and when remonstrated with, will quote them for authority, and proceed with nonchalance. I have seen what I relate within the last few months. Young professional men are generally open to practical conviction, but their demeanor in this capacity is frequently marked with a self-reliance that is only explainable by faulty or incomplete instruction. Next, the inventive genius of the nineteenth century has expended no little of its energy on ether inhalers. I have hardly a kind word for any of them, and certainly nothing but condemnation while the patient is conscious. We are all familiar with what is claimed for them. They fit the face accurately; they supply air evenly, but in restricted quantities; they economize time and ether, etc. The more surely are these indications met, more surely are we bound to produce primary suffocation.

It is not always easy to persuade the patient that her predecessor in the use of the inhaler did not temporarily mistake it for the cuspadore, and after a little use the evidence is discernible by both sight and smell. I have seen the nauseous effects of ether prolonged and intensified by too vivid recollection of the inhaler's condition. It is true they can be cleansed, but ordinarily a little washing in cold water is all the cleansing they receive.

We are led from experience to expect the "*period of excitement,*" and we are all familiar with the phenomena that occur at this time; but it is an interesting question what relation the injudicious application of the inhaling apparatus has to the causation of this. In the first few inspirations a proper regard for the patient's requests is observed; very soon, however, he is considered irresponsible for his ideas, and force is required to restrain him. A man will fight for breath as long as he has breath with which to fight, and he is past all persuasive influence when he begins to experience the sensations that he can properly mistake for approaching death; hence he struggles until he is overcome by exhaustion, or overpowered by brute force. Patients in this condition have to be controlled, but I know that a little thoughtfulness on the part of the man with the ether will rarely render force called for. In other words, "period of excitement," "taking ether unkindly," are terms synonymous with carelessness and thoughtlessness on the part of the administrator. Then, for humane reasons, more attention should be paid to this subject. But we are called to be still more thoughtful. Is it not probable that systemic conditions demand, in time of surgical necessity, all possible tranquillity of circulatory and nervous action? And this brings me to my second proposition.

2d. To the careless administration of ether are due some adverse surgical results.

There can be nothing salutary to the most trivial operation in the chain of phenomena that begins in suffocation and ends in exhaustion and nausea. Secondary hemorrhage, gaping wounds from torn sutures, hernia, muscular soreness amounting almost to traumatism, pulmonary and cerebral congestion, are legitimate results of the abuse of ether. They are sometimes the result of the careful *use* of it. I can in this connection further explain my reasons for denouncing inhalers and their forcible application.

If we look for a moment at the physiological inspiratory act, we find that air enters the nostrils, and during its passage to the larynx and trachea it encounters anatomical regions that serve to purify it and moderate its temperature. In health and in ordinary exercise breathing can be conducted properly; but when from causes like a closure of the nasal passages from influenza, or from over-exertion, air cannot enter the lungs in sufficient quantities, the mouth is brought into requisition and we respire comfortably. If the over-exertion is continued, soon the accessory muscles of respiration are called upon for over-action, to free the lungs of their rapidly increased burden. But it is clear that the mouth was never intended as a respiratory passage, and when from indiscretion or necessity over-exertion is made in a cold atmosphere, the bronchial mucous membrane suffers. Thus in a cold winter's morning we involuntarily avoid continued conversation, and the amount of exercise we take is proportionate with our normal breathing capacity. Violence of action at this time leads directly to congestion, possible hemorrhage or pneumonia.

The vapor of ether is as frigid a medium as we are likely to inhale in the north temperate zone. Given the conditions I have previously described, and we have all the essential elements to cause any amount of pulmonary mischief.

The statistics of M. Erichson show that "pneumonia is common after severe surgical operations, 45 per cent. of deaths from these causes presenting signs of inflammation of the lungs." (*Med. and Chir. Transactions*, Vol. XXVI.)

Juergensen says (*Ziemssen's Cyclopœdia*, Vol. V., p. 188), "that among exciting causes of catarrhal pneumonia foreign bodies in the bronchi and inhalation of gases are to be included in the category." On page 186 of same volume he says that "catarrhal pneumonia never originates primarily in the alveoli, being usually preceded by an inflammation of the bronchial mucous membrane. It is only when an *irritant*—such as chlorine gas, for instance—has exerted its action simultaneously on the

alveoli, as well as on the bronchi, that inflammation arises in both at the same time."

I remember to have heard Dr. A. L. Loomis say, in speaking of surgical pneumonia, that "there was something yet to be learned concerning it." In view of its unsatisfactory explanation, and in view of the morbid conditions of the blood supposed to be conducive to its occurrence, I submit that I am justified in my suspicion concerning prolonged or forcible anæsthetization.

About a year ago it became my duty to assist an aural surgeon in trephining the mastoid. The patient, a man of middle age, of robust health and of fine culture, had contracted middle ear trouble by salt water bathing. Wilde's incision had been made on two separate occasions; he had endured frequent punctures of the membrana tympani without complaining.

In this operation it was deemed advisable to give him ether. Preparations having been made the ether was commenced, the cone being snugly applied over the face. Although the patient made every effort to control himself, profound anæsthesia was produced with more than ordinary difficulty. The operation was successful, and the escape of pus demonstrated alike its necessity and his danger. I saw him twenty-four hours after, and when interrogated he apologetically referred to his conduct, but said, "I can stand any amount of cutting, but I want no more suffocation." In a few hours he became comatose, and he remained in this condition until his death the day following.

Gentlemen, the prognosis was extremely bad in this case from the beginning, but who can say that the meningitis from which he died was not invited? Untoward surgical results may be dependent upon various subtle influences.

As long as direct evidence is so difficult of attainment, we must be content to circumscribe real causes by proofs of exclusion.

3dly. A few observations concerning its administration that will render it least objectionable.

For all short operations primary anæsthesia only should be produced. By primary anæsthesia I mean that period of insensibility that occurs a few moments after the calm introduction of ether, and lasts generally from forty to seventy seconds. A good way to detect this stage is to follow the instruction that recently appeared in one of the journals, viz.: Direct the patient to elevate the fore arm upon the arm and when insensibility supervenes the hand will drop. This can be accomplished in every case if care is observed in administering the ether; but if coercion is used the nervous and general excitement is so great that it may not occur, or if it does, is of so short duration that it cannot be detected. From this stage

the patient recovers instantly, experiencing no pain or nausea, and in a few moments is able to appear alone in the street. It is well to watch for this state, even if profound anæsthesia is to be produced, for by constant observance we become more expert in its detection, and by so doing we save ourselves and patients subsequent annoyance and detention.

Observing the usual instructions concerning the patient's preparatory condition—selecting pure and fresh ether—being provided with general and cardiac stimulants—it has been my practice to administer ether in the following manner: Being provided with a sponge slightly excavated, and surrounded by a towel or paper, or both, to prevent any unnecessary escape of ether, the patient is apprised of the sensations that will supervene until unconsciousness is reached.

Complete confidence having been attained, the patient, lying down, is directed to close his eyes and breathe quietly through his nostrils. During inspiration the sponge is applied, so that a good admixture of air is taken; it is then quickly removed. Those who have experienced the simple removal of an unnatural and obstructing substance from the nose and mouth can best appreciate the great relief this will occasion, especially as the process continues.

Inspiration again occurring, the sponge is again applied and removed as before; this continuing, the patient is gradually accustomed to the ether, becomes unmindful of the successive invasions of the sponge at each rhythmical application. Soon the sponge can be retained in position for awhile; but at the first indication of discomfort it should be removed and applied as before until the patient becomes indifferent to its presence, or unconscious.

I have in this manner produced anæsthesia without a movement on the part of the patient of any importance.

I have quieted others when the contest raging between them and their subduers seemed very uncertain.

Still it is not always productive of such good results. Ether is an intoxicant, at best, and we cannot expect rational actions from giddy cerebri; but I claim that the delirium will be less violent, and the exhaustion less, if the patient's last conscious act is not an attempt to free himself from a hard concave inhaler in the hands of a thoughtless physician.

TREATMENT OF THE DROWNED.

TWO THINGS TO BE DONE: RESTORE BREATHING; RESTORE ANIMAL HEAT.

RULE 1. *Remove all Obstructions to Breathing.* INSTANTLY loosen or cut apart all neck and waist-bands; turn the patient on his face, with the head down hill; stand astride the hips with your face towards his head, and, locking your fingers together under his belly, raise the body as high as you can without lifting the forehead off the ground (Fig. 1), and give the body a smart jerk to remove mucus from the throat and water from the windpipe; hold the body suspended long enough to slowly count ONE, TWO, THREE, FOUR, FIVE, repeating the jerk more gently two or three times.

Fig 1.

Fig. 2

RULE 2. Place the patient face downward, and maintaining all the while your position astride the body, grasp the points of the shoulders by the clothing, or, if the body is naked, thrust your fingers into the armpits, clasping your thumbs over the points of the shoulders, and *raise the chest as high as you can* (Fig. 2) without lifting the head quite off the ground, and hold it long enough to *slowly* count ONE, TWO, THREE. Replace him on the ground, with his forehead on his flexed arm, the neck straightened out, and the mouth and nose free. Place your elbows against your knees and your hands upon the sides of his chest (Fig. 3) *over the lower ribs, and press downward and inward with increasing force* long enough to slowly count ONE, TWO. Then suddenly let go, grasp the shoulders as before and raise the chest (Fig. 2); then press upon the ribs, &c. (Fig. 3). These alternate movements should be repeated 10 to 15 times a minute for an hour at least, unless breathing is restored sooner. Use the same regularity as in natural breathing.

Fig. 3.

RULE 3. After breathing has commenced, RESTORE THE ANIMAL HEAT. Wrap him in warm blankets, apply bottles of hot water, hot bricks, or anything to restore heat. *Warm the head nearly as fast as the body, lest convulsions come on.* Rubbing the body with warm cloths or the hand, and slapping the fleshy parts, may assist to restore warmth and the breathing also. If the patient can SURELY swallow, give hot coffee, tea, milk, or a little hot sling. Give spirits sparingly, lest they produce depression. Place the patient in a warm bed, and give him plenty of fresh air; keep him quiet.

BEWARE!

AVOID DELAY. A MOMENT may turn the scale for life or death. Dry ground, shelter, warmth, stimulants, etc., at this moment are nothing,—ARTIFICIAL BREATHING IS EVERYTHING—is the ONE REMEDY—all others are secondary.

Do not stop to remove wet clothing before efforts are made to restore breathing. Precious time is wasted, and the patient may be fatally chilled by the exposure of the naked body, even in the summer. Give all your attention and effort to restore breathing by forcing air into and out of the lungs. If the breathing has just ceased, a smart slap on the face or a vigorous twist of the hair will sometimes start it again, and may be tried incidentally, as may, also, pressing the finger upon the root of the tongue.

Before natural breathing is fully restored, do not let the patient lie on his back unless some person holds the tongue forward. The tongue, by falling back, may close the windpipe and cause fatal choking.

If several persons are present, one may hold the head steady, keeping the neck nearly straight; others may remove wet clothing, replacing at once clothing which is dry and warm; they may also chafe the limbs, and thus promote the circulation.

Prevent friends from crowding around the patient and excluding fresh air; also from trying to give stimulants before the patient can swallow. The first causes suffocation; the second, fatal choking.

DO NOT GIVE UP TOO SOON. You are working for life. Any time within two hours you may be on the very threshold of success without there being any sign of it.

In suffocation by smoke or any poisonous gas, as also by hanging, proceed the same as for drowning, omitting effort to expel water, etc., from the windpipe.

In suspended breathing from effects of chloroform, hydrate of chloral, etc., proceed by Rule 2, taking especial pains to *keep the head very low*, and preventing closure of the windpipe by the tongue falling back.

The foregoing method, originally published by the State Board of Health of Michigan, has the sanction of other State and City Boards of Health, and is fully endorsed by the State Board of Health of Connecticut, and printed for general distribution as a life-saving measure.

BROOKLYN ANATOMICAL AND SURGICAL CLUB.

Stated Meeting, July 21st, 1879.—Continued.

OSSEOUS TUMOR OF THE ILIUM, WITH SPONTANEOUS DISLOCATION OF THE HEAD OF THE FEMUR.

Dr. B. F. Westbrook presented a patient for the examination of the Society, who was the subject of a tumor involving the left ilium, accompanied by an enlargement and displacement of the upper part of the corresponding femur, with the following description of his history and condition:

A. B., æt. 50 ; a native of England ; a carpenter by trade.

Had been healthy up to eight years ago. Eighteen years ago he had a sore on the corona glandis, the scar of which he still bears. There was no suppurating bubo. No history of secondary symptoms.

Eight years ago, while working at his trade, he felt pain in the right hip and thigh. It increased in severity so that he stopped work, and went home, a distance of several miles, walking part of the way and riding the remaining distance in the horse-cars. The pain came on quite suddenly. He had not injured himself in any way. On reaching home it was necessary to cut his clothes in order to remove them.

The hip, thigh and leg became greatly swollen, and exceedingly painful ; he was feverish and remained in bed several weeks. It was six or seven months before he could walk again. A large swelling developed in the region of the right haunch, below the crista ilii. This has gradually diminished in size. He is now working at his trade, but is exceedingly lame, and owing to the constant strain upon the trunk muscles necessary to maintain the upright position of the body, suffers from pain and soreness in the right lumbar region, and in the back and abdomen.

There is some atony of the bladder, the urine being retained sometimes twenty-four, and rarely forty-eight hours. He also suffers from indigestion, vertigo, etc. The bowels are regular. The gait shows a marked shortening of the right leg. A comparison of the two limbs as to length gives the following result:

	Right.	Left.
Ant. sup. spin. to int. malleolus. . . .	43 inches.	45⅜ inches.
Tibia.	26½ "	26¾ "
Fibula.	27¼ "	27 "
*Femur.	30½ "	30¾ "

*From the top of the trochanter major to the head of the fibula, the external condyle is not easy to locate.

Drawing a line from the anterior superior spinous process to the tuberosity of the ischium, the top of the left trochanter was found to be 1 in. below, the top of the right trochanter 2½ in. above that line. The exact location of the spinous process on the right side was difficult of determination, as there is a tumor involving the anterior and outer portion of the crest, the horizontal ramus and a portion of the venter of the ilium on that side. This tumor is of considerable size, projecting upward probably 1½ to 2 in. above the level of the horizontal ramus, and extending downward externally under the muscles attached to this portion of the bone an uncertain distance. When the patient lies on his back with the thighs extended, it forms a marked prominence in the inguinal region. It is very firm, apparently bone. The upper extremity of the femur is much enlarged, its shape somewhat changed, and when the limb is rotated, projects far enough to indicate that the head and neck are present. It gives rise to a bulging just beneath the crest of the ilium. This bulging becomes very prominent when the limb is rotated inwards. The glutei are freely movable over it. When the thigh is flexed or circumducted a rubbing sound can be distinctly heard. On examination per rectum, as suggested by Dr. F. W. Rockwell, nothing abnormal can be felt, with the exception, perhaps, of a slight projection inwards at the foramen ovale. The position of the limb is not characteristic of anything except shortening. A No. 14 Van Buren's sound passed into the bladder without difficulty.

There can be little doubt that this is a spontaneous dislocation of the head of the femur.

The cause would seem to be obliteration of the acetabular cavity by ihc bony growth above described.

Special Meeting, September 1st, 1879.

The President, Dr. L. S. Pilcher, in the chair.

DISTENSION OF GALL BLADDER FROM IMPACTION OF CALCULUS IN DUCTUS COMMUNIS CHOLEDOCHUS; ASPIRATION; ESTABLISHMENT OF PERMANENT EXTERNAL ABDOMINAL BILIARY FISTULA.

Dr. H. F. Williams, on behalf of Dr. Archibald Campbell, presented a specimen consisting of the gall bladder and its ducts, with the portion of the duodenum into which the common duct empties, and also a portion of the abdominal wall adherent to the fundus of the gall bladder, in which a fistulous opening exists, communicating with the cavity of the same. The gall bladder contained twelve calculi of the size of cherry stones; the common choledoch duct was much dilated to within

a few lines of its opening into the duodenum, and within it was enclosed a calculus much larger than those in the gall bladder, which could be freely moved backward along the dilated tube, but when pushed forward became impacted in the narrow portion and occluded it.

The history was as follows: The subject was a female, aged 35 years, a native of Madeira. In January, 1879, had a severe attack of hepatic colic; was relieved by treatment; within a week after recovery, after carrying a weight which pressed upon the right hypochondrium, suffered a second more severe and prolonged attack; became much jaundiced; stools were clay-colored; urine was loaded with bile. On the tenth day a tense tumor was detected in the abdomen, three inches to the right of the median line, extending from the lower border of the liver to a little below the level of the umbilicus. In consultation with Dr. Williams, this tumor was aspirated February 22d, 1879; about sixteen ounces of very fetid thick bile were drawn off; pain was at once relieved; but little constitutional disturbance followed. The next day the patient had a large stool, the first half of which was clay-colored, and the last half was tinged with bile, the dividing line between the two parts being very abrupt. The inference was that a calculus had been impacted in the common duct which had been in some way dislodged by the relief of the pressure from behind of the over-distended gall bladder, so as to permit a temporary escape of the bile through the duct. To prevent recurrence, it was proposed to produce adhesion of the gall bladder to the abdominal wall by the use of caustics; to open then the gall bladder and attempt the removal of the calculi which might be found therein. Potassa fusa was accordingly applied over the site of the puncture; in a day or two the peritoneum seemed to have been reached; a hypodermic needle was then passed through the centre of the issue to the depth of an inch, but no fluid could be obtained by the syringe. It was concluded that the attempt had failed; further procedure was suspended, and the issue was permitted to heal by granulation, which it did in a few days. The patient again became convalescent, and finally took a long ride in a horse car, which resulted in another attack of colic. The next day the gall bladder was found greatly distended; it was again aspirated and about twelve ounces of thick bile removed; a probe introduced through the aspirating canula failed to detect any calculi, but provoked some hemorrhage. The relief which the first aspiration produced did not follow the second one, and the fæces remained clay-colored till her death, one month afterwards. A few hours after the aspiration an opening formed to the right of and close to the umbilicus, and from it came bile mixed with a few drops of pus, which discharge continued more or less profusely till she died. As the surroundings of

the patient were unfavorable to recovery, she was received as an in-patient in the Helping Hand Dispensary, where generous diet and tonics were systematically administered. At the end of two weeks there was no improvement in her health, and it became evident that only some operation would afford relief. The sinus opening at the umbilicus was probed and found to lead directly under the issue we had made in February, and it seemed probable that the gall bladder was adherent to the abdominal wall at this point. It was proposed, therefore, to cut down upon the sinus at the place where it passed under the eschar, and then endeavor to gradually dilate the passage into the gall bladder and thus reach the stone. On the 16th of June, assisted by Drs. J. C. Hutchison, H. F. Williams, A. R. Paine and Dr. Campbell, made an incision through the eschar and opened the sinus. The patient was so weak and bore the inhalation of the ether so poorly that nothing further was done. During the night some bile flowed through the incision—patient seemed very weak and vomited quite often ; the next day she seemed somewhat easier, and at 5 P. M. was quite comfortable ; at 6 P. M. she was seized with a violent pain at her heart, after vomiting, and died very suddenly, before any aid could be summoned.

An autopsy was performed next day by Drs. Pilcher and Williams. All the organs except the liver seemed in a fairly healthy condition. The liver was very friable and the biliary ducts greatly distended with bile ; the heart was somewhat flabby, but otherwise normal.

MANILLA PAPER CORSET FOR ANGULAR CURVATURE OF SPINE.

Dr. L. S. Pilcher presented a little patient suffering from angular curvature at the junction of the cervical and dorsal vertebræ, who, after apparent recovery, and freedom from all symptoms of active disease for some time, had developed symptoms of recurring disease. He had applied to the child a paper brace, following the directions of Dr. A. M. Vance as given in his paper in *The Medical Record* of June 21st, 1879, which had served as a base of support for the chin-rest apparatus of Dr. C. F. Taylor. The application had proved in this case to be very satisfactory ; the child was wearing it with comfort, and relief of all the previous symptoms had followed its use. The corset was unlaced and removed in the presence of the Society, and a demonstration given of the freedom from all chafing of the skin with which it was attended, and also of the ease with which the cares of cleanliness could be given to the part of the body enclosed by it.

PAINFUL NEUROMATA IN STUMP AFTER AMPUTATION—EXCISION.

Dr. F. W. Rockwell presented three small fusiform tumors removed by him from a stump resulting from an amputation of the forearm, the history of which was as follows :

I. B. has been suffering for eight years with an exquisitely painful stump, the result of amputation of forearm for gunshot injury. The pain has been constant, with exacerbations of a lancinating or stabbing character, and referred particularly to the thumb, index and little finger of the missing hand.

The patient, although a man of great natural fortitude (the amputation was endured without an anæsthetic), says that during rainy weather or the prevalence of easterly winds his agony has been unendurable, and at such times he has been unable to control his movements and features. As he is a public lecturer, the latter fact has interfered seriously with his manner when before an audience. A singular clinical fact in his case is that during the whole period of his suffering he has lost but *one night's sleep.*

An examination (under an anæsthetic) revealed the presence of a tumor situated in the vicinity of the radial nerve, and another upon the ulnar. I accordingly made a large anterior flap, and laying it back, came directly down upon the larger of the growths and found it to be the nodular end of the radial nerve. As the operation was a bloodless one (Esmarch's), I carefully followed the nerve up to about 2 inches above its bulbous end, and resected at that point. The radial artery could be seen for about an inch of this distance, and pulsated strongly after the bandage was removed. It was not, however, wounded. The other two growths proved to be situated in the ends of the ulnar and median nerves. But one small vessel required ligature.

Wound was carefully washed with sol. thymol, covered with a rubber dressing, over which cotton soaked in 20 per cent. carbolic acid, in oil, was applied. Patient is making a rapid and perfect recovery (Sept. 6th); none of the old pain since Sept. 1st, previous to operation.

MULTIPLE AND DIFFUSE ANEURISM OF THE THORACIC AORTA.

Dr. Geo. R. Fowler presented a specimen with the following history:

J. H., æt. 52, sea captain, born in Norway. Twenty years ago he contracted a venereal sore, the exact nature of which does not now seem apparent, but the history of its development seems to point to the probability of its having been a chancroid. He was accustomed to perform great feats of strength with the muscles of his head and neck. He first came under my observation about two years ago, then complaining of wandering pains in the chest. A diastolic murmur was observed, its point of greatest intensity being near the apex and not transmitted in the course of the great vessels. He subsequently made several voyages. April, 1879, I was again summoned to attend him. I found him very much emaciated, and complaining of a great deal of pain in the right iliac and lumbar region. Dr. Figueira also saw him at this time and

ventured the suggestion of the existence of a possible nephro-lithiasis.

Examination of the urine voided during these paroxysms of pain failed to throw any light upon the diagnosis, and careful exploration of the abdominal cavity yielded equally negative results.

The pains being somewhat alleviated by morphia, he put to sea. The pain again returned with increasing severity; and in May he was put ashore at Turk's Island in a very feeble condition, suffering intensely. The surgeon upon the Island gave him large quantities of morphia, and about the middle of May he arrived home by steamer.

The day following his arrival I saw him, when I discovered for the first time a broad and flat tumor occupying a space extending from a line drawn downwards through the axilla to a line passing through the spinous processes of the vertebræ. The tumor extended upwards to within an inch of the angle of the scapula and downwards to the last rib. The outlying portions of the growth were apparently solid, whilst the central portion pulsated synchronously with the heart's action. No bruit could be discovered. A diagnosis of aneurism was made at this time. During the following few days several of my medical friends saw the case, among them Dr. Chas. Jewett, who, after long and patient examination, failed to discover any bruit, or any other evidence of aneurism save the pulsation. They were forced, however, by eliminating all other probable pathological conditions, to come to the conclusion that aneurism of some large vessel could alone give the distinct and decided heaving pulsation possessed by this tumor.

After the lapse of several days Dr. L. S. Pilcher saw the patient. In the meanwhile the broad area of the tissue had increased, but not so the pulsating portion, which seemed to remain at a standstill. I must confess that this circumstance rather shook my faith in my diagnosis of aneurism, and when Dr. Pilcher suggested the existence of one of those pulsating tumors of very rapid growth and great vascularity (medullary sarcoma), which so frequently simulate aneurism, I became very skeptical of my own powers of observation.

The patient continued to suffer intense pain, referring it principally to the right limb and the right iliac and lumbar regions. The doses of morphia were made larger and larger, until finally 3 grains were consumed every half hour, and perfect freedom from pain was not then obtained. About the 20th of June the integument covering the tumor sloughed and began to ulcerate; the surrounding parts became doughy and œdematous. He died in great agony, from exhaustion, on the 26th of June, although he took upon this day and the night preceding 3 grains of sulphate of morphia every quarter of an hour.

Post mortem, 12 hours after death.—Rigor mortis well marked. Body

very much emaciated. Upon turning the body upon its left side the growth, as heretofore described, presented itself, the integument covering it in a sloughed and ulcerated condition. A crucial incision was made through the coverings of the tumor and the flaps carefully turned aside. We then came down upon an immense clot, dark and easily breaking down under the pressure of the fingers. The hand being passed through the opening and a large basin full of the clot removed, an immense cavity was discovered, seeming to fill up nearly half of the abdomen. A large sponge was placed in the opening and the body placed in the prone position. An incision in the usual way was made from the episternal notch to the symphisis pubis, and the dissection carried on from in front. Upon removing the viscera the cavity entered from behind proved to be the interior of a large aneurismal sac. Further search revealed the existence of several dilatations of the thoracic aorta, each as large as an orange. The upper or first one of these sprang from the transverse portion of the arch of the aorta, near the left subclavian artery, and extended sufficiently far upward to cause erosion of the last cervical vertebra. The second one occupied the descending portion of the arch and had almost completely destroyed the bodies of the second and third dorsal vertebræ. The third and fourth dilatation were close together, they each in turn destroying the bodies of the vertebræ upon which they rested. The fifth or lower one sprang from that portion of the aorta immediately above the cœliac axis. This latter had become diffused, burrowing its way downward and backward, following the posterior osseous wall of the trunk, dissecting up the psoas iliacus and quadratus lumborum muscles, reaching downward in the cavity of the abdomen to the crest of the ilium, eroding the lower ribs upon the right side, and presenting itself externally and posteriorly in the locality before described. The liver was found somewhat enlarged, as also the spleen. The kidneys were congested, but otherwise normal. The large vessels gave evidence of atheromatous degeneration. The heart presented nothing to account for the diastolic murmur observed by nearly all the gentlemen examining him.

Erratum.—On page 213, line 9, September number, for Dr. F. W. Benson, read Dr. F. W. Bowron.

Ἀσκληπιὸς ὁ Σωτὴρ

Χαρμα μέγ' ανθρωποισι, κακων θελκτῆρ' οδυναων.

Hymns of Homer, No. XVI.

PROLIFERATIONS.

——THROUGH THE COURTESY of Dr. HENRY B. BAKER, Secretary of the Michigan State Board of Health, we have been enabled to secure the cuts illustrating "Treatment of the Drowned."

——"DOCTOR, I am very much troubled with these pains, but I find considerable relief from a bandage over the region of the liver."

"Then by all means wear a belt. A simple strip of flannel will answer every purpose, only be careful to draw it a little tighter on the side where your liver is than on the other."

——THREE PRINCES OF SCIENCE meet in consultation to pass upon the puzzling case of their distinguished patient, General X.

"Well, Thomas," says the General to his faithful valet, when the doctors have gone; "what did they decide upon? Tell me the truth, now."

"Well, General, each one of them had a different opinion, and that stout, good-humored gentleman with the ribbon in his button-hole said they must have patience a little while longer—the autopsy, whoever he is, would be able to set them all right."

——DR. L—— is cautiously treating a sick man, concerning the nature of whose disease he is quite in the dark.

"Well," he says to the nurse, on making his usual morning visit, "how do we find ourselves to-day? Did he sleep well? Did the medicine act?"

"Yes, sir, he slept, but I left the gas burning, turned down very low."

"Ah, he slept well, did he? I thought he would. And you left the gas burning—turned down low? Very good, very good; all is going very nicely." And he takes his hat.

"What, Doctor! Have you no instructions—no prescriptions—nothing?"

The Doctor (sagely, and after mature deliberation)—"Yes; keep the gas burning—turned down very low."

——The cinchona is also called "Jesuits' bark," as it is said that its virtues were first discovered by a Jesuit in 1535 and that it was extensively used by the order. However that may be, the Countess of Chinchon (often incorrectly written Cinchon), who had been Vice-Queen of Peru, on her return to Spain in 1632 introduced Peruvian bark into Europe, and to perpetuate the remembrance of this important service Linnæus gave to the plant the name cinchona.

——Diphtheria.—The valuable properties of a solution of chloral as a topical application to the throat were referred to in a discussion at one of our recent meetings. From Morrell Mackenzie's monograph on Diphtheria, it appears that chloral-syrup, 25 grains to the ounce, ranks high in his esteem as a local application; "it rapidly gets rid of the fetor, and it is beautiful to see the membrane loosen and come away, leaving a healthy surface underneath."

——Chloral in Diphtheria.—Rokitansky, of Innsbruck, has used a 50 per cent. solution of chloral as a local application to the membrane, by hair-pencil, every half hour. Pain seldom severe, salivation is intense. In an hour and a half pieces of membrane came away on the brush; and at the end of two to four days the surface of wound had granulated. As the surface improved in appearance the solution was gradually diluted.—*Lancet and Clinic.*

——"The Intellectuality found in association with disease, and which may reach a high development among a nation of valetudinarians, is neither vigorous nor lasting. Certain weeds may be cultivated until they come to assume the forms, and even affect the dainty coloring of flowering plants; but the beauty is evanescent and the prodigy is seldom reproductive. Vigorous brain-power cannot be permanent unless it be supported by a high state of physical efficiency—in a word, health."—*Lancet.*

——Hot Underground Air.—In the Comstock lode, in Nevada, the temperature of the air has been as high as 123 degrees Fahr. Generally in freshly opened drifts it ranges from 108 degrees to 116 degrees. The rock, recently drilled, averages 130 degrees. Water flowing along the drifts sometimes reaches 150 degrees and upwards.

——The Regular Monthly Meetings of the Medical Society of the County of Kings are held at 8 P. M. on the third Tuesday of each month at Everett Hall, 398 Fulton Street.

The October meeting will be held on the 21st, at which there will be presented the following papers :

Ulcers, Varicose Veins, and Cutaneous Diseases of the Leg by Martin's Pure Rubber Bandage, by Francis H. Stuart, M.D.

Medical Testimony in Courts of Law, by W. F. Sanford, M.D.

An Unusual Case of Morphia Addiction, by J. B. Mattison, M.D.

——New Members.—At the September Meeting, Dr. W. F. Sanford, 101 Oak St., E. D., was elected. Drs. F. Madden, E. D. Hospital; J. Meyer, 390 Graham Ave., E. D.; and E. Carolan, 362 Bedford Ave., were proposed for membership.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

OFFICERS AND COMMITTEES FOR 1879.

President.....J. S. Prout, M.D., 167 Clinton St.
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PROCEEDINGS

OF THE

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

STATED MEETING, OCTOBER 21, 1879.

THE PATHOLOGY OF ULCERS, AND THE TREATMENT OF ULCERS, VARICOSE VEINS AND CUTANEOUS DISEASES OF THE LEG BY MARTIN'S PURE RUBBER BANDAGE.

BY F. H. STUART, M.D.

The lower extremity is the seat of disease of various forms. Its dependent position and its constant exposure to injuries serve as the exciting causes of extensive and protracted disease. The most common and important of those diseases are ulcer, eczema and varicose veins. They are painful, all of them. They undermine the health, even when the health is not already broken, and the individual thus predisposed to such disease. Indeed, it would not be difficult to maintain the position that broken health is a necessary antecedent of most of the diseases referred to. At any rate, in most instances, when these cases come under the care of the surgeon the disease has existed for a long time. Many domestic remedies have been tried, all with a like discouraging result. At last a doctor is seen; this ointment or that is applied, his blood (which is "out of order" and has caused the trouble) is prescribed for, but still there is no relief, or, at best, it is only temporary. Another doctor is consulted, who, at the second visit, is probably told that that "stuff" (meaning ointment, or medicine, or both) is the same Doctor A. gave, and it did no good. So the story might be continued. In

short, these diseases of the lower extremity have been a bugbear to physician and surgeon—the latter having little better success in treating them than the former.

The number of cases is great, and a successful method of cure will confer the blessing of comfort, health and vigor to many. But a successful and permanent cure will depend upon a correct appreciation of the causes of these diseases and the relation of these causes to the conditions found. Pre-eminently, *treatment must be based upon pathology.* Professor S. D. Gross says: "It may confidently be asserted that there is not, in the whole domain of surgery, a class of maladies, the *pathology* and *treatment* of which are less understood by the profession generally, than those of ulcers."*

It is difficult to formulate the pathology of ulcers. Yet the phenomena attending their formation can be so described as not to raise disputed questions or provoke discussion of the meaning of terms.

An ulcer is the last stage of a pathological process. This pathological process we must study, if we would successfully and truly cure the ulcer. The chief elements of this process are: (1) deranged circulation, and (2) impaired or arrested nutrition. These two involve a third (3), disturbed innervation. Each of these react upon and aggravate the others. These are the three factors in all ulcerations. It concerns us now only to study them in relation to ulcers of the leg.

I.—DERANGED CIRCULATION IN THE LEG.

This is brought about by a variety of causes. Among these I mention: much standing without change of posture, constriction of limbs by garters, exertion, and any other way in which the onward current of the blood is impeded or obstructed. The result is a gradual yielding of the coats of the vein. This distension of the veins retards the flow of blood. The capillaries in turn enlarge in diameter, and permit exudation of serum and even of cells.

The valves of the veins are separated, leaving a chink between them. They soon atrophy, becoming in time entirely useless. An effort is sometimes made to compensate for the dilatation by a thickening of the walls of the vein by connective tissue between the muscle cells.† They may also be thickened by plastic infiltration and organization in the outer or cellular coat.

It is commonly thought that the deep veins are not subject to the varicose condition, being compressed and supported by the muscles. But this idea is not correct. The circulation in these is frequently in-

* System of Surgery, vol. I, p. 172.

† Billroth's Surgical Pathology, p. 525.

terrupted by the contraction and pressure of the muscles upon them. Provision for this is made in that the valves are more numerous in the deep than in the superficial veins.* It is to be remembered that the valves do not act at all in aiding the onward progress of the blood, but by supporting the column of blood above them. They are only closed when the current is interrupted, when they serve to distribute the blood tension in the portion of the vein below them.

This condition of weakness of veins and disturbed circulation usually only obtains in persons whose general health is below the normal, so that not only is the blood-supply disturbed, but the blood quality defective.

II.—IMPAIRED OR ARRESTED NUTRITION IN THE LEG.

This, from one point of view, is but a corollary to what has just been said. The integrity of the tissues depends first of all upon the blood supply being regular and sufficient. This cannot be in the condition just spoken of. But ulcers often exist independently of varicose veins, or any other *visible* disturbance of the circulation. "A state of nutritive equilibrium"† is dependent not alone upon the blood-supply. The conditions upon which it depends are both local and general. From some cause or causes, as exposure to heat or cold, pressure, injury, and many other agents, the tissues may imperfectly or entirely fail to appropriate the elements from the blood necessary to their growth and maintenance. Or the nutrition may be affected through the blood by the quantity and quality of the food, by changes in the blood itself, by exercise, by occupation, by climate—in short, by all the conditions, internal and external, which affect and determine the general health. The nutritive process may, in a sense, be still going on, but the products are abnormal.

I have hitherto purposely avoided the use of the word *inflammation.* I have preferred to refer to some of the phenomena observed in the course of these diseases of the leg. These phenomena, and others to which I shall refer, are the phenomena which, *collectively*, are usually present in the condition called "inflammation." The term is indefinite. It describes nothing. It means more or less, according as we observe, analyze and study the abnormal processes. "Their effect," as Carpenter says, "is to produce a depression in the vital powers, which manifests itself in *a deficient as well as abnormally directed formative activity*, and in *an increased tendency to degeneration.*"‡

* Holmes' System of Surgery, Vol. III, Article on Diseases of Veins, by Mr. Callender.

† Hermann's Human Physiology, translated by Gamgu, p. 231.

‡ Physiology, p. 455.

III. — DISTURBED INNERVATION.

The influence of the nervous system in maintaining the integrity of the tissues and the function of the different parts of the body is clearly established. *How* it does so, is yet a matter of debate. In the diseases under consideration there is intimate connection between the cerebro-spinal nervous system and the sympathetic system. Both sets of nerves are disturbed. The vaso-motor nerves by the dilatation of the capillaries become exhausted. Morbid nutrition is caused by nerve disturbances as well as by nerve defect.

The pain of these diseases is sometimes excessive. This is often due to pressure upon the nerve by the distended veins, for the pain is greatest when the patient is standing or sitting; "but if the leg is lifted up, and the blood vessels so emptied, the pain is quickly relieved."* Or pain may be caused by destruction of nerve tissue, or by stretching and compression.† It is also to be remarked that the irritation of the pain affects the general health, as well as the local condition.

The phenomena thus briefly described usually co-exist in the diseases of the leg referred to in this paper. It is seldom that one is found alone. We *may* have varicose veins without much appreciable disease besides; but exudation and infiltration eventually follows. The part comes to be in the state called chronic inflammation. "This inflammation may be located in the depths of the cutis, in the cellular tissue, muscles, glands, periosteum or bones. * * * * * The skin is traversed by dilated vessels, hence it is redder than normal; it is swollen, partly from serous, partly from plastic infiltration, and is sensitive to pressure. * * * * * The papillæ are larger and more succulent; the development of the cells of the rete Malpighii also become more plentiful, its superficial layers do not pass into the normal horny state; the connective tissue of the papillary layer is softer and becomes partly gelatinous."‡

The ulcer results from a bruise or other injury to *tissues that are already in a state of disease-lowered vitality.* But these injuries cannot be said to be other than the exciting causes. Cuts and bruises are every day made upon healthy skin. These heal readily, and leave only a slight cicatrix, or no cicatrix at all. It is not easy to determine the cause of this condition of lowered vitality. Most likely it is not a local cause. But the leg, being removed from the centre of circulation, becomes the seat of manifestation of the *dyscrasia.* The ulcer may be healed, cicatrization

* Hilton: Rest and Pain, p. 122.
† Holmes' System of Surgery, V. I, p. 37.
‡ Bilroth's Surg. Pathology, p. 392 and f.

may be brought about, but there remains the chronic inflammation of the surrounding tissues. The skin remains bluish or brownish red—a condition of lowered vitality that makes it ready to break down in ulceration again as soon as the limb is used. (See case No. 1.)

I need not dwell in particular upon the pathology of eczema of the lower extremity, after what has already been said.

In regard to diagnosis of ulcers of the leg, it is to be observed that varicose ulcers are situated below the middle of the leg, and usually are single. They are to be distinguished from syphilitic ulcers, which are multiple, and exist usually above the middle of the leg.* Mr. Hilton gives this explanation of why these ulcers so frequently occur at the inner and lower part of the leg: "The superficial and deep veins of the leg freely communicate with each other in the neighborhood of the ankle-joint. The first two inches above that point is the spot where the greatest stress is laid upon these superficial veins; below that point they freely communicate, and if the blood cannot return by the superficial veins, it can do so by the deep veins, and *vice versa.*"†

To enter upon the description and classification of ulcers would too much extend this paper. My object has been merely to call to mind general principles—a broad basis, which gives the best vantage-ground for practice.

Nor can I refer to the almost countless and frequently worthless means of treatment which have, from time to time, been proposed. The characters of ulcers are so various and usually so well marked, that the appropriate treatment can only be selected after a careful diagnosis. Each case claims a particular study. But just as there are general principles of pathology underlying their formation, so there are general principles of treatment applicable to a great variety of cases.

The first step in the process of healing seems to be the subsiding of the swelling in the surrounding tissues. Hence whatever tends to remove this swelling promotes the healing process. One of the most important and certain means of securing this is by compression, regularly applied. Bandages of various kinds have been used for this purpose for many years. Plaster dressing and adhesive plaster have also been recommended. The success of Baynton's method is due to the compression of the vessels and tissues, and not, as he supposed, to the effect upon the lymphatics alone. This is one of those curious instances where a practical man suggests a valuable remedy, but gives an erroneous explanation of its action.

* Maunder: London Hospital Reports, V. II, p. 129.

† Rest and Pain, p. 123.

In the pure rubber bandage of Dr. Martin, of Boston, is found a most valuable addition to the means of cure of a large class of diseases.* It meets indications that are almost essential to success. My experience of over a year does not warrant me in speaking of it as enthusiastically as its author does. Yet cases of ulcer, varicose veins and eczema have improved and been cured with *remarkable* rapidity; and *in every case* the expression of *comfort* from its use has been very emphatic. "I would not be without it," "I would not take five dollars for it," "I would not part with it"—are common forms of expression after a patient has used it for a short time. Although ulcers, varicose veins and eczema may be cured by other means, the great advantage of the rubber bandage is, that it permits patients to go about and pursue their avocation. They do this with great comfort, and without at all interfering with the process of cure. Indeed, I am of the opinion that it is a great aid to cure for patients to be about. The general health is invigorated, and they experience the tonic effect of feeling and being as comfortable and vigorous as ever. Every one has observed how curative this mental state is in almost every class of disease. It is a therapeutic measure eagerly to be sought after.

It may be well to inquire how the pure rubber bandage accomplishes the result in these cases. It does so by the gentle, equal and continuous pressure it maintains. It supports and assists the capillary circulation. This pressure also promotes the absorption of the fibrinous or serous deposits in the tissues. The rapidity of the absorption is sometimes very surprising. (See case No. 2.) It is not necessary to raise the question as to how this is accomplished—whether by the effect upon the lymphatics or by the capillaries. It also mechanically expels the blood from the over-distended and weakened veins, which it supports and compresses. Often there is a weakened condition of the heart. In these cases the feeble circulation is aided by the elasticity of the bandage. The continuous warmth and moisture, and the exclusion of the air, are other elements contributing to the favorable result.

The mode of application is important. It should be applied so as to make *gentle, even pressure.* It should not give the sensation of squeez-

* In Liston's Elements of Surgery, edited by Dr. S. D. Gross, and published in Philadelphia, in 1842, p. 133, referring to varicose veins, occur these words: "The Indian rubber bandage worn over the stocking or drawers answers fully as well as any other method."

We see in this re-discovery or revival of the use of the rubber bandage, another instance of the repetitions of history. Remedies and appliances once in common use are, after a time, laid aside, to be revived in a subsequent period. Then they are popularized by some zealous discoverer, to be again pushed aside and for a time to be forgotten. Each time they leave marks behind, like the débris on the seashore, which shows how high the tide once rose—becoming standard or mark of reference.

ing. It is only necessary to put it on tight enough to keep its place. It does not readily slip. Each fold should overlap the previous one about a half an inch. It is not necessary to make any reverse turns—only to wrap it round continuously. Its elasticity makes it fit everywhere with equal smoothness and comfort. It should always be begun at the toes. It is applied directly to the surface, no protective being anywhere necessary. I always direct the patient to take it off *after* getting into bed, having previously made ready two basins of water by the bed—one to sponge the leg, and the other to wash off the bandage. Then simply cover the ulcer or eczematous patch with muslin, so as not to soil the bed-clothing. The bandage is hung over a chair till morning. It is to be re-applied *before rising*. No ointment or grease of any kind should ever be used, as it soon destroys the rubber.

I conclude by giving the histories of three cases, and showing two of the patients:

Case No. 1.—Varicose ulcer of 30 years.

J. W., male, age 60 years; born in Ireland; weighs over 200 pounds; is 5 feet 10 inches tall; is a laborer. Had varicose ulcer on the right leg for 30 years. It has been healed three times. Each time he went to the hospital, and remained about five weeks. Treatment was by bandages and salve, and by keeping the limb elevated. Each time he remained "cured" about two months. Soon after going to work it began to itch and pain him, and then to get sore again.

First seen July 16th, 1879. Present condition: There are two ulcers—one above and anterior to the external malleolus, 2¼ inches long and 1¾ inches wide. For three-fourths of the circumference has a hard, thick edge, with steep side, making the ulcer look as if a portion of the thick skin had been punched out. The other is over the shin; is 1½ inches by 1¼ inches; is irregular in shape, but of the same general character. The skin, from the tarso-phalangeal articulation in front, as far up as the middle of the leg, is thickened, the infiltration being quite dense. The same condition exists around the whole remaining portion of the leg above the ankle to the middle of the leg. Superficial veins of the whole surface enlarged. Veins in the popliteal space much enlarged and corded.

July 23d. Edges of ulcers are softer, and the general appearance is much improved. He has had great comfort from the use of the bandage.

October 12th. Ulcer over the external malleolus is healed entirely; there is no trace of it; cannot tell its location. One over the shin is healing. Has been at work paving streets for over six weeks. Is on his feet all day. General health is good. Leg itches at various points above the middle at night after removing bandage. Has had great comfort ever since he began to wear the bandage. He has had no other treatment.

Case No. 2.—Periostitis, with extensive exudation. Marked anæmia, with œdema of both extremities.

C. G., male, age 14 years. Fell on the ice last winter, cutting the left knee and spraining the left ankle. Had apparently recovered from these. In April, after exposure to wet and cold, he was suddenly taken to bed with swelling and pain in the leg above the ankle. Was poulticed, and it discharged large quantities of pus.

Leeches were also applied about the external malleolus. He was in bed about six weeks.

First seen September 20th, 1879. General condition: Face is waxy pale; ears transparent; lips white. Both feet are œdematous. Is in very poor flesh. Tongue pale; urine clear and pale, contains no albumen.

Left tibia seems enlarged on the inner aspect of the leg. There is also much infiltration and induration of the soft parts. There is a cicatrix--resulting from the discharge—in front of and above the inner malleolus. Behind the outer malleolus there is a small ulcer. On the outer side of this leg there is also a good deal of œdema.

Sept. 24th. Applied rubber bandage and directed the following : Take of Tr. Ferri Chloridi, ten drops, ter in die.

Sept. 26th. Feels much better; can walk with greater ease and vigor.

Oct. 10th. Swelling very much reduced. The rapidity of the absorption is wonderful. Ulcer healing. General health greatly improved. No œdema of either leg. Seems bright and much more vigorous.

Case No. 3.—Eczema of both legs.

W. L., male, age 21 years; occupation, a telegrapher; formerly for 5 or 6 years was a messenger. First seen July 16th, 1879. Has had severe eczema of both legs for 5 or 6 months. The right one is much the worse. It extends from the ankle to the knee on both legs. The scabs are in some places over half an inch thick. Applied rubber bandage to right leg only. July 21st, five days after, the scabs were all removed; most had come off at the close of the second day. The skin was perfectly smooth, dry and soft. It apparently was normal skin, except that it was very red. Says he has had great comfort. Did not see the patient again until October 13th. He has used the bandage alternately on his legs most of the time since I last saw him. Both are cured, except a few small patches on each. Advised him to continue its use until entirely cured.

MEDICAL TESTIMONY IN COURTS OF LAW.

BY W. F. SANFORD, M.D.

The very important duties which the physician has to perform as medical witness are known and acknowledged by all, and have formed a prominent part of legal investigations wherever law deserves to be called a science. From the nature of the subjects in regard to which he is generally called to testify—life, death, health, disease or bodily suffering—his testimony must ever be of the greatest moment to the parties for or against whom he is called, and to the public who wish the guilty to be punished and the innocent to go free.

Every physician is liable to be called, and most physicians in active practice are frequently called, to testify in regard to such important matters. They should not shrink from this duty, but should aim to do their best in this as in all other branches of their professional work, feeling the same responsibility which the conscientious physician feels when his

finger is on the pulse of the very sick patient, or when his hand guides the scalpel in difficult attempts to relieve suffering and save life.

A complete discussion of my subject would include, in addition to accurate knowledge of the general science of medicine, a thorough treatise on Medical Jurisprudence and the Law of Evidence. I shall assume that we all possess the former as a necessary sequence to the degree of M.D., and I do not propose to attempt the task of explaining either of the two latter subjects in the limits of this paper. My desire is to offer a few suggestions, derived from study of law and personal observations in courts of justice, which I hope will be sufficiently practical to be of service in some of your experiences on the witness stand.

The testimony which the physician gives in courts of law, in matters relating to his profession, is of three kinds, which I may classify as follows:

1st. Simple testimony—of facts observed while performing his professional duties.

2d. Medical testimony.

3d. Medical-expert testimony.

I have made these divisions that I might more clearly, in a few words, show the marked distinctions between the different forms—a distinction too often lost sight of by the doctor in the confusion of his examination, from the fact that he very commonly (and the general practitioner usually) is called on to testify in the same case in two or three capacities before leaving the stand. Perhaps a failure to keep in mind when he is giving testimony as a simple or medical witness, and when as a medical expert, is more than anything else the cause of confusion and embarrassment. We should always bear in mind that when we are asked in regard to observed facts—no matter whether these facts are of a strictly medical nature or not—we are to follow the same rules as govern all ordinary witnesses, and must simply state what we saw and did, and what was said by and to us.

But whenever our *medical opinion* is asked in regard to any real or supposed state of facts presented to us, we then are to testify as experts, and are to be governed by entirely different rules of law.

Perhaps we may understand this distinction better by keeping in mind that an ordinary witness never is allowed to testify to an opinion, and that whenever the doctor gives an opinion he is giving strictly expert testimony, which must be kept distinct from his testimony of facts.

I have often seen this simple distinction lost sight of by medical men of large experience and knowledge.

"I was called to see Mr. A——, on June 10th, 1876. He had fallen from a truck and the wheel had passed over his leg below the knee, caus-

ing a compound fracture so severe that amputation was necessary. Not being in circumstances such that he could be cared for at his home, I sent him to the City Hospital, where his leg was amputated June 11th," etc.—The honest doctor commences to tell, and wonders why he is stopped by one or more counsel, and perhaps the judge included. He has sworn to tell "the whole truth," and wonders that he is not allowed to tell it. Simply, he is not allowed to proceed, because he is not telling the truth in the opinion of the law and is telling what may lead to much error in the minds of the jury.

The first part of the testimony was proper.—"Called to attend Mr. A—— " at date stated. A matter of simple fact, of personal experience. "He had fallen from a truck" is not truth in law, for the doctor did not see him fall; neither did he see the wheel pass over his leg. That the leg was broken was correctly said, for it was an observed fact, and would not place the witness in the position of an expert proper until he expresses his opinion that amputation is necessary. This is distinctly a matter of opinion, as also is the clear diagnosis of the fracture, and should be given as such with the reasons for the opinion, if asked. The facts in regard to the patient going to the hospital and the operation are matters of hearsay, unless the doctor went with him, and was present at the operation, and, by rules familiar to all in regard to all witnesses, cannot be received. Even the remark in regard to the circumstances of the patient would have to be explained more fully, or it could not be received, for he might have been a miser, and although seemingly poor, might have plenty of gold to pay for the best of treatment.

Unless the physician keeps the distinction clear between his duties on the witness stand in reference to matters of fact and matters of medical opinion he is constantly being interrupted, and what he says fails to make a proper impression in favor of the truth, and frequently brings him and his profession into unnecessary ridicule.

Of simple testimony—my first division—I need say but little, excepting to distinguish it from the other forms. It differs from the testimony of witnesses in general only in the fact that it relates to matters observed while in professional work. It is our duty, before going into court, to try to recall any facts coming under our observation relating to the matter in question. Seemingly unimportant facts may have much to do with the case. All memoranda in "case books," "visiting lists," or even ledger (for the latter is sometimes very useful in fixing dates), should be looked over, or may be taken into court to assist the memory. Looking over the visiting list for other calls made the same day as the one we wish to remember more fully, has once or twice, in my own experience, helped by association to recall things of importance in regard to which

I was called to testify. The physician, from the nature of his visits, is often "behind the scenes," and may be able to give very important testimony in matters coming immediately to his knowledge. Of things concerning which he must not testify I shall say a little under another head.

What I have called medical testimony should be carefully distinguished from medical-expert testimony, but the same rules of law govern it as govern simple testimony. It involves the strictest medical knowledge; but as the very training of the physician tends to make him a careful observer, particularly of medical facts, this is the kind of testimony in which he appears to the best advantage, and in giving which he seldom blunders. It is one of the forms of testimony most important to the public, and the greatest care should be used in making the observations concerning which the physician is to testify. This is the form of testimony, given after examinations for coroners, of the appearances of wounds and causes of death, to discover poison, etc. As these examinations involve frequently special knowledge, and as persons particularly skilled in such matters are commonly called to make such investigations for the purpose of testifying, this topic is not so important to us in cities as to the country practitioner, where specialists do not abound; but any of us may be called at any time in certain cases, and it is important for us to use the greatest care in every such observation, as the fate of innocent persons may hang on even little details. Careful notes should be taken and examinations made, not only of the body, but of its position and surroundings. Remember that in this, as in simple testimony, matters of professional judgment should not enter. If expert testimony is asked in the same case and at the same time, it should be kept entirely separate from the former with conscientious care, that no juror may mistake supposed facts for the facts themselves. "A wound such as I have described would produce death," might easily be understood by a juror to mean "did produce death," which is, or might be, quite a different thing, as, *e. g.*, if proven to have been made after death. The method of our examination and its results should be carefully explained, and care taken to avoid all technical terms and use only such expressions as an ordinary jury can understand. Study the subject carefully, renewing as fully as possible your knowledge of anatomy and pathology which may have any bearing on the case, before going into court; for you will have to undergo severe cross-examination, and every attempt will be made to show that you know very little about these subjects, and it is very pleasant to be able to produce the impression on the jury that you know something of the subject under discussion—perhaps a little more than the examining counsel.

Medical-expert testimony is one of the forms—perhaps the most

important form—of expert testimony in general. Experts are defined by the authorities on evidence as "persons professionally acquainted with the science or practice in question," or "conversant with the subject-matter on questions of science, skill, trade and others of like kind." The general rule of evidence, as before stated, is that the witness must state facts, and is not allowed to express an opinion. The jury are to form their opinion from the facts. But the peculiar testimony of experts is taken for the express purpose of getting an opinion in regard to facts presented, for the jury to receive instead of their own opinion, provided they find the facts upon which the conclusion is based proven and the expert of sufficient authority. The expert is a sort of special jury to decide on given facts, and in such case is not a witness at all in the ordinary sense. The jury accept his decision simply because it is of matters in regard to which they have not the necessary knowledge to enable them to form a wise judgment. The law will not allow opinions to be given under the pretense of expert testimony in regard to a "subject-matter, the nature of which is not such as to require any peculiar habits or study in order to qualify a man to understand it." Hence the physician must be careful to limit his opinions expressed to medical matters entirely, for he is only an expert in regard to them. The law guards the introduction of expert testimony in general with great care, but allows much freedom in the testimony of medical experts, from the fact that it relates to matters in regard to which an ordinary jury are particularly incompetent to judge. The doctor is generally asked his opinion on a supposed case by counsel, and the ruling whether the question is a proper one is given at once. If he is allowed to proceed he may give his opinion freely. If he is asked upon what he bases it, he may answer simply on his "own knowledge and experience," or he may refer to authorities, and even is allowed to quote or read from them in necessary cases. If called on to give an opinion in regard to the proper treatment in any given case, it is wise to remember that while it is right and proper to state our own views, drawn from considerable experience and study, in a positive manner, we should avoid producing the impression that our opinion is the one held by medical men in general, unless in a case where the authorities are well agreed. A neglect of this rule often puts a brother physician in a very unpleasant light, and brings much unnecessary discredit on our profession and on the witness himself. We should also be very careful to have the full case in our minds before giving an opinion, for we know how differences of person and surroundings cause us to modify a general rule. Then we should avoid, by all means, the impression on the jury that a certain mode of treatment is the necessary one to cure a given disease. Let us

not deceive them by giving to our treatment the name of "cure" in its strict sense. In the vast majority of cases we scarcely modify the disease, and frequently do not shorten it. You would treat rheumatism with alkalies, perhaps, but do not cast discredit upon others who treat it in a different way. Several years ago excellent results were recorded in an English hospital from treatment entirely with peppermint water. Be careful in such a case not to state a hobby of your own as the proper method, without saying that no remedy, in the present state of our knowledge, seems to have much control of the disease, and that numerous remedies are used for it. Even in surgery, where, perhaps, there is not as much chance for difference of opinion, and where the facts can generally be more clearly presented to the jury, remember that an established method of treatment may not be the only one which has excellent authority in its favor. How easy it would have been a few months since—before the publication of a new mode of treatment for "hip disease," by a prominent member of this Society—for a physician testifying in court to have thrown discredit on a brother who was a little in advance of himself in a novel mode of treatment, which, having been presented by so excellent a surgeon and observer as the author of the said paper, we shall all be ready to try.

Medicine is decidedly a progressive science, and what to-day may be unknown to us as a method of treatment, may after a little be the standard mode. I am inclined to think that it would be better for us to consider the practice of medicine more as an *art*, and less as a science, where we are to pass judgment as to the treatment in any given case, and to give our criticism as in regard to the other arts—for example, the art of painting—judging of the painter and his work from our knowledge of his skill, reputation and results of previous and present labor, and not from any particular manner of holding the brush or mixing the colors. The courts are more and more favoring this method of determining whether a physician has used proper skill in a given case. Questions as to his reputation for skill among his brethren become very important and proper. But the witness is not allowed to express his opinion as to whether he thinks him a skillful man from what he has seen of him personally.

I wish here to correct an impression common among young practitioners in large cities, that they will only be called on to testify as simple witnesses, as the specialists will be called to give the expert testimony. This is a mistake. You will almost never leave the witness stand without being questioned as an expert by one side or the other, or by the judge. And for my own part, I think there is wisdom in this plan, of which I find lawyers and judges are so fond. There are many questions

(even relating to such matters as require to the greatest degree the wisdom of specialists, as, *e.g.*, the diseases of the eye) in which the opinion of the general practitioner is of equal or even of more value than that of the specialist. And when it is not, and where the physician testifying sees before him the great authorities on the special question before the court who are to follow him, he cannot prevent being asked for his opinion on any medical subject. But he can, and should, precede his opinion by a statement that he has little knowledge upon this special topic, compared with those who make it a particular study, and that he is in the habit of referring such cases to those thus qualified. And in such case he need not fear appearing ignorant or of saying, "I do not know." His testimony, even then, may be of great value, as giving greater weight to the opinion of those who are to follow him. It is a comfort to us sometimes, in such cases, that we have not tried too hard to give a definite opinion, for we may find that the authorities who follow us are unable to do so.

In regard to the manner of answering the questions asked and the personal behavior of the witness I wish to say a few words.

First. Answer as directly and clearly as possible, consistent with the rules of evidence previously stated, and as further explained by the court at the time.

Second. Remember that whether the question is or is not a proper one, or whether your answer to it shall be received, is a point of law to be decided by the court, and does not concern us in the least as witnesses. Hence if any objection is raised to the question or to your answer to it, do not attempt to explain or continue, but wait calmly until the question is decided, and then follow the decision. Whenever either counsel objects, stop—if in the middle of a word or sentence—until you are told to proceed; and if, in the midst of a rapid discussion of counsel, you are in doubt as to when to continue, or as to whether you are to answer a given question, turn to the judge and ask. It is very foolish, but common, for those not familiar with courts, to act as if an objection to an answer was a personal criticism or insult. It is natural that this should be so, since, in the heat of cross-examination, lawyers often forget to be entirely gentlemanly in their manners, and too often attempt the so-called "brow-beating" style. But the physician who keeps his temper and waits for the decision of the judge, and answers calmly and carefully, remembering that his rights are protected by the court, will rebuke the angry counsel much more completely than by any attempt to defend himself, and will thus protect his testimony and profession from unnecessary discredit.

Third. Don't answer too hastily. Somewhere I have seen a rule,

given by a physician of much legal experience, something like this: "Answer all long and elaborately put questions with a short answer; all short and quickly spoken questions with a slow and carefully explained answer." This rule, I think, is an excellent one to bear in mind, but cannot, of course, be safely followed in all cases. It is particularly appropriate where there is an evident intent to entrap the witness by getting him to state on the impulse of the moment what, on more consideration, he would not wish to go to the jury in the form presented. I do not, however, think we can safely follow any general rule, but must be guided by the individual case and not answer too hurriedly.

Fourth. Don't think you are obliged to answer exactly after the form in which the question is asked. It is always proper and best to do so, when you can do justice to yourself and your opinion thereby. But often the counsel will try to insist on a categorical answer, when to give it would not be easy, not necessary, and would perhaps produce a wrong impression. In such case, you have a right to say, "I cannot answer that question categorically." Then let the question be decided by counsel and judge whether you shall answer in some other way, or not at all, or whether some other question shall be substituted.

Fifth. Use simple language, avoiding technical terms as much as possible, and if it is necessary to use them, explain them fully and carefully. The jury are not supposed to know the meaning of any medical terms. It would seem that common sense would prevent any violation of this rule, but it is often broken in the most unnecessary and foolish manner by men who are constantly explaining in clear and easy words many medical topics to their patients. I have sometimes thought that physicians testifying were under the momentary impression that they were again being examined for their degree of M.D., and that the jury and court were the examining committee. Many other suggestions might be given, but these seem to me to be among the most important. Our position in court is so very different from that which we occupy in our usual work—where we are arbitrary rulers of the form of "unlimited monarchs," who are accustomed to say and do as we think best, without any to check or direct—that it is necessary for us often to use considerable self-control, in order to adapt ourselves to the new position, and to thus maintain the dignity of our profession, of the members of which that prince of lawyers, Blackstone, said, they have no reason to "apply themselves to the study of law, unless to complete the character of general and extensive knowledge—a character which their profession, beyond others, has remarkably deserved."

A few words in regard to our legal liabilities as witnesses, and in regard to what are called "privileged communications." Whenever we

are served properly with a subpœna—without a fee in criminal cases and with an accompanying fee of fifty cents in civil cases—we must attend and testify. This sometimes is a great hardship, but it seems to me we are apt to exaggerate it. For we should remember that we are relieved from jury duty, which is so inconvenient to business men, and which, on an average, probably occupies their time longer than our special duty as medical witnesses detains us. This is only one of the cases in which our professional "rank imposes obligation," and we should not complain.

In a single case by the statute of New York the physician need not testify, or, rather, is not allowed to testify, without the consent of the patient. This law is in regard to "information disclosed to a physician while attending a patient in his professional capacity, which information was necessary to enable the physician to prescribe for his patient." There is much misunderstanding among medical men in regard to this very proper law. When a physician is called to testify as to any such confidential disclosure he must plead his privilege. He must bear in mind that it is the privilege of his patient, rather than his own, and it can be waived only by the express consent of the patient. It has been decided that it does not survive the decease of the patient, and, hence, cannot be raised in regard to the capacity to make a will, upon a question of probate. The following are not considered confidential communications within the meaning of the law:

(*a*) Communications made before employment as a physician, or after such employment ceased.

(*b*) Where being consulted as a physician the doctor refuses to act as such, and hence is applied to only as a friend.

(*c*) Where a fact merely took place in presence of the physician.

(*d*) Where the matter communicated could, in no sense, be considered in its nature private.

With this single exception we must testify to the whole truth when called to do so, and our desire should be to perform our professional duty, in this as in all other matters, well.

THE USE OF ONE BLADE OF THE FORCEPS IN SOME KINDS OF DIFFICULT LABOR.

BY W. H. MARTIN, M.D.

The fœtal head bears such relations to the maternal pelvis that easy and safe delivery is probable only when the occiput in its exit passes under the pubic arch, and occipito-anterior are, properly, the only natural positions. When the occiput is posterior, the first uterine efforts are applied in attempting to bring it forward, and in eighty per cent. of cases this attempt is successful, although the occiput must traverse three-eighths of the whole pelvic circumference to get under the pubes. In the twenty per cent. of cases where this attempt fails difficult labor results. As the occiput sinks into the hollow of the sacrum the forehead is pressed against the body of the pubic bone. The forces which mould the occiput so readily cannot make the unyielding forehead "fit" under the pubic arch; the occipito-frontal diameter of the head fills the same pelvic diameter that is occupied in natural labors by the one-inch-shorter sub-occipito-bregmatic; and it is not until the occiput has swept over the dangerously distended perineum that the forehead and brow are permitted to slip down and out. The contrast between this process and a natural labor justifies the search for some safe way of converting occipito-posterior into occipito-anterior positions.

Before entering upon the subject of treatment, let us consider, first, what makes the occiput originally posterior; secondly, what prevents anterior rotation when natural efforts fail to effect it. It is evident that the conditions which cause the malposition may differ from those which prevent its rectification. The position is determined before true labor begins; the obstacles to rotation are active only as labor progresses. The two questions, therefore, must be treated separately.

Without attempting to discuss various theories of causation, I will at once state my belief that, in general, occipito-posterior positions are produced by the concurrence of two conditions: excessive lateral obliquity of the child's head, and excessive leaning of the uterus to that side on which the occiput lies.

Up to a week before labor sets in, the head is, usually, free to fix itself where it can find most room; that is, with its antero-posterior or longest diameter in or near the transverse or longest diameter of the pelvic brim. At about this time, however, the uterus assumes a greater tonicity than was evident earlier; its muscular fibres gather themselves

up for the impending effort. The pressure upon the uterine contents is increased, and the whole uterine mass tends to sink—and often does observably sink—lower into the pelvis. It is during this period, I believe, that the position of the occiput is determined.

All observers agree that there is, at least during the first stage of labor, a rotation of the head upon its antero-posterior axis such that the parietal bone nearer the pubis is lower in the pelvis than its fellow. This lateral obliquity—due, probably, to the prominence of the sacro-vertebral angle—varies in degree and is sometimes very great. It is also a matter of common observation, that the median plane of the uterus at full term very often does not correspond with the median plane of the body. Let us, then, take for illustration a case where the uterus leans very much to the *right*, where the occiput is in the *right* half of the pelvis, and where the sagittal suture is near the sacrum.

The first result of these conditions is that the posterior part of the left parietal—rather than any part of the occipital—bone sustains the greatest pressure; a broad surface meets the pelvic resistance, and the head glides, or rolls, upon the brim before it can sink below it. Again, the forehead bears too lightly upon the brim, and is inclined at too great an angle with it to accomplish the fixation of the head in the transverse position. In the third place, the uterine forces act obliquely to the plane of the brim. For the resultant of all the forces brought to bear upon the child may be represented as a straight line, nearly coincident with the long axis of the fœtal ovoid, which axis is not, in this case, perpendicular to the plane of the brim. The pressure from above, therefore, tends to roll the head upon the edge rather than to force it into the cavity of the true pelvis. Now the occiput—being the more movable end of the fœtal-head-lever, whether we consider the forces acting from above, or the resistance-pressure from below—moves first, and must move in the direction of least resistance, which is backward; because the comparatively narrow vertex is directed backward, the broad parietal bone forward. Therefore, as soon as the head begins to descend, the occiput follows the tendency already impressed upon it, and an occipito-posterior position results.

It is easier to explain why natural rectification does not always occur. The effective cause of non-rotation, where the pelvis is normal, I conceive to be simply and solely too rapid descent of the head. The transverse diameter of the pelvis constantly narrows from above downward. At the brim it averages five inches, at the outlet less than four. Consequently if the occiput be posterior, and rapidly descending, it is easy to see how soon the long diameter of the head will be unable to pass, in rotating, between the planes of the ischia.

It is evident that pelvic deformities of various kinds interfere with rotation. But distortion, great enough to be recognized early, makes rectification either impossible, or possible only by a severe forceps operation. Such cases are, therefore, beyond the scope of this paper.

Many of the conditions described in text-books as preventing rotation —for instance, unusual size of the head, weak pains, the mere length of the rotation—I consider to be merely aggravations of a difficulty, in the causation of which they have no share.

Several modes of treatment have been advised and practiced in occipito-posterior cases.

The most usual management is, to leave everything to Nature, until the necessities of the case require the forceps to be applied at the sides of the pelvis, and the head to be extracted with the occiput passing over the perineum. The difficulties attending this mode of termination have suggested several plans for rectification before the head descends.

It is enjoined by some, and "considered advisable" by others, to push up the head with the fingers, at the same time urging the occiput forward ; and to attempt nothing further if this manœuvre fail. Even with the hand wholly within the vagina I do not conceive it possible in this way to disengage the head at the brim, and sweep the occiput through nearly three-eighths of the pelvic circumference. While, if the head is low down, the occiput cannot be rotated so far by any amount of pressure. Those who claim to have done this must, in my opinion, simply have pushed up a forehead which was too low in the pelvis, and have altered the position of a head already transverse. In other words, I consider this operation feasible only in occipito-iliac positions, the management of which does not concern us here.

Dr. Hamilton, of Edinburgh, applies the long straight forceps of Zeigler at the sides of the head, and extracts without rotating. The rotation may "make itself," but he seems to be indifferent as to whether it does or does not. I have too much respect for the care which Nature shows in adapting means to ends, to consider further a treatment which ignores the mechanism of labor.

It has been recommended to apply the curved forceps to the sides of the head and make rotation; then, withdrawing the instrument, to reintroduce it along the sides of the pelvis and extract in the usual way. In the first part of this operation the risk of injury to the mother is very great. During the whole movement, through nearly a quarter of a circle, the curve of the forceps never corresponds with the curves of the pelvis. I believe this operation is rarely done in this country.

The usual operation is to apply the long forceps with one blade at the side of the occiput, with the other at the opposite side of the forehead ;

the rotation to be effected and the head to be delivered before the instruments are removed. I know that this operation has often been in every sense successful; I have done it myself several times, and always without injuring mother or child. But I think so serious a procedure should be confined to the cases of contracted pelvis, which demand it; especially as in normal pelvis we can make the rectification by an easier and safer method.

In such cases, therefore, I bring the occiput forward with one blade of the forceps, and, when rectification is complete, remove the instrument without attempting to deliver the head. As this operation has never, to my knowledge, been exactly delineated, even in the text-books that advise its use, and as it is, I believe, little resorted to by practitioners, I will take the liberty of describing it in detail:

The uterus must be steadied by an assistant, and held with its axis as nearly as possible perpendicular to the plane of the brim. Suppose the occiput near the *right* sacro-iliac synchondrosis; the *right*—or, as most forceps are made to lock, the anterior—blade is introduced; the left hand guiding it well up over the occiput until its fenestra embraces the protuberance. This exact relation must be attained and retained to ensure success. The inner surface of the handle of the instrument—our constant guide—will face obliquely backward and toward the right. The left hand, removed from the vagina, must grasp the shank of the instrument, which should be nearly in the centre of the vulval opening. The first traction should never be downward, but directly forward, for two reasons: downward traction would tend, first, to increase the lateral flexion of the head, and secondly, to impact it in the constantly narrowing transverse diameter. The shank must be used as a pivot for the blade and must be carefully prevented from changing its relation with the perineum while the handle is being moved backward, as the blade is bringing the occiput forward. As soon as the head is transverse—that is, as soon as the inner surface of the handle looks neither forward nor backward, but directly toward the right—traction must be made both downward and forward. When the lower part of the blade appears at the vulva, when the handle is well back upon the perineum, and when the inner surface of the handle faces in a direction just between the symphysis pubis and the right acetabulum—the instrument has done its work and should be removed. Examination will now discover the occiput at the right pubic ramus—that is, in one of the two natural positions—and it ought to be speedily delivered by natural efforts. If, however, the condition of the mother or the state of the fœtal circulation indicate that there will be danger in delay, both blades of the forceps may be applied in the usual way, and delivery can be effected with certainly more ease and rapidity than if rectification had not been made.

Both steps of the operation should be taken slowly. The first—anterior rotation—during a pain and an interval; the second—rotation and descent—during several pains and intervals. For we must remember that in natural labors the movement is effected only after the repeated application of forces which mould the head in accordance with its changing position.

Every occipito-posterior case, when recognized early, must be carefully watched; frequent examination is not only admissible, but imperative. If the occiput seems merely reluctant to come forward, and is descending slowly, or not at all, it *may* be turned in the right direction by continued pressure with the fingers. But if it is being rapidly forced down we must operate at once; because a few pains may so aggravate the malposition as to make judicious interference impossible. Two things are to be especially remembered: 1. The operation must not be attempted at all when the head is low in the cavity of the pelvis and the occiput nearly in the hollow of the sacrum. 2. In decided pelvic distortion one blade of the forceps is not adequate to the requirements of the case.

Essential points in the performance of this operation are: 1. We must be absolutely sure of the exact position of the occiput. 2. The os-uteri must be dilatable, if not fully dilated. 3. The point of the blade must be well up; the fenestra must enclose the occipital protuberance and must retain this relation to the end. 4. The first traction must be directly forward; the occiput must not be allowed to descend until nearly opposite the acetabulum. 5. The head must not be extracted with the single blade, however tempting the opportunity.

I have seen several occipito-posterior cases, but have available notes of only seven. Two were seen too late for rectification; in both forceps had to be used for extraction; in one (primipara) the occiput tore the perineum in passing. In five cases I used one blade to rectify the position; in four the labor was terminated within an hour by the natural efforts; in one, the mother being in uræmic convulsions, I brought the occiput forward with one blade, then immediately applied both blades and delivered—the second stage of labor occupying just twenty minutes. If I had used both blades for rotation as well as extraction, the one operation would have taken longer than the two, and would certainly have been more severe as regards both mother and child.

I will now briefly consider the subject of face presentations.

All positions of the face are simply converted head positions, the conversion being effected by a complete extension of the chin from the sternum, partial extension producing brow presentations. Just as occipito-anterior are the most common of head positions, so chin-posterior—

which result from them—are the most common of face positions. The chin takes the place of the occiput in its relations to easy delivery; a natural termination being possible only when the chin passes under the pubic arch. In the majority of cases, therefore, the chin has to make the long rotation forward, original chin-anterior cases being very rare.

Face presentations are produced, as occipito-posterior are, by excessive obliquity of the head and of the uterus. But there is this important difference: the uterine obliquity is toward that side in which the *forehead*, not the occiput, lies. In this case, the *occiput* is held above the brim by the uterine obliquity, and is made to slide over it by its own obliquity, the broad parietal surface failing to fix itself at the brim. The forehead has nothing to antagonize its descent, but impelled at first only by the tonic uterine contraction, does not descend *into* but moves *across* the pelvis, so that when vigorous pains *do* occur, the forehead takes the place of the occiput, the chin that of the forehead. If the forehead descends before it has completed its transit, a brow presentation results. There are other causes for face positions in special cases, but I believe this is the *rationale* of their occurrence in general.

Obstetrical authorities very generally and very emphatically discourage the attempt to convert face into vertex positions, the only management recommended being that which ensures the getting of the chin under the pubis. But from the time of Bandelocque to the present day there have been advocates of rectification. The temptation to interfere is strong, because every face case is a difficult one, and because it can be made easy by simply bringing down the occiput.

With a mere reference to the early-proposed and now abandoned methods of rectification, such as podalic version, Bandelocque's hooking down of the occiput with the fingers, Sir Jos. Clarke's pushing up and back of the presenting part, and others properly obsolete—let us pass to the more modern plan of using one blade of the forceps, and consider whether it, also, deserves to be neglected or condemned.

As it is often possible to present a subject more forcibly by illustration than by argument, I will take a case from my own practice and describe the operation in detail, for the sake of indicating what I consider essential to success.

Early in a labor I discovered a face presentation, with the chin at the right sacro-iliac synchondrosis, and not yet engaged in the brim. The pelvis was normal, the pains regular and strong, the condition of mother and child good. As soon as the os was sufficiently dilated, the situation in other respects being unchanged, I introduced, at the end of a pain, the left blade of the forceps, keeping it in close contact with the forehead of the child. I passed it up in the direction of the sagittal

suture, letting the fingers of the right hand touch the posterior part of the anterior fontanelle *through* the fenestra of the instrument. The end of the handle during this movement described a forward and upward curve, tending neither to the right nor left. As soon as the point of the blade was far enough up to hold the occiput—the right hand estimating how far it had passed beyond the anterior fontanelle—I brought the handle forward, and made traction directly down, permitting the occiput to make *no* rotation forward. I kept the right forefinger within the fenestra of the blade as the head descended, and in this way was able to detect the first tendency towards slipping, which was immediately remedied by bringing the handle further forward as the blade was passed up. The point now hooked over the occipital protuberance, and it was easily brought down to the left pubic ramus. The whole of this movement was accomplished during an interval; but I waited for a pain to fix the head in its new position before removing the instrument. The child was delivered by natural efforts in about an hour and a quarter afterwards. This is one of three cases in which I have operated in this way with perfect success.

It will be seen that the essential points of the operation are: to keep the point of the blade closely applied to the head in introduction as well as traction; to hold the fingers on the sagittal suture until descent is assured; to be certain that the line of traction is perpendicular to the plane of the brim; to avoid using leverage with the pubic bone as a fulcrum; to prevent any anterior rotation of the occiput, lest the chin, or the nose, or the brow be caught at the promontory of the sacrum; finally, to remember that the operation is not intended to effect delivery, and that it is possible to bring down the occiput too far.

I believe that by the proper use of this method, in proper cases, chin-posterior can always be converted into occipito-anterior positions. The only real objection ever made to the operation is, that it is often unsuccessful. Many practitioners never attempt it, because they have known it to fail in experienced hands. But even experienced hands sometimes (for instance, in consultation cases) try the use of one blade of the forceps only when it is too late to interfere at all. To attempt rectification when the chin is low down, and ready to come forward, is to bring discredit upon the operation. Very often, a correct conception of the position is not attained until the chin is either transverse or anterior, and the examiner is apt to forget that if he had made an earlier diagnosis he would, probably, have found the chin posterior. The point I make, therefore, and indeed the chief object of this paper, is to insist upon the necessity for an exact diagnosis of the position as early as possible in every labor.

With regard to original chin-anterior positions I have no personal experience, as I do not remember ever to have seen a case. To rectify such a position requires a double operation : first, to bring forward the forehead ; secondly, to bring down the occiput. That this can be done is proved by the report of several cases, to one of which I will refer. In the Bulletin of the N. Y. Academy of Medicine for September, 1860, is published a case by Dr. J. Martin, in which the critical part of the operation is described as follows : "I drew down the occiput, and drew it forward to the left ischiatic notch, thus correcting the chin-extension and making rotation forward simultaneously." In two hours a living child was delivered by the natural efforts. This case shows a practical success, which tends to disarm criticism. But it seems to me that, in general, it would be better to bring forward the forehead first, and make rectification of the chin-extension afterward. In this way we avoid the danger of bringing the head too low in the pelvis for rotation to be easy—perhaps, for it to be possible. If, therefore, I discovered a chin-anterior position while the head was high up, pains regular, but not rapid, and chin not too near the symphysis pubis, I would use one blade of the forceps to bring forward the forehead in the plane of the brim, and, when this was done, would bring the occiput directly down ; if possible, without removing the instrument. I do not think, however, that all the conditions which ensure success in this operation are often present.

In conlusion, it is scarcely necessary to say, that the use of one blade of the forceps, as I have advised it, is not new, nor original. My excuse for this paper lies in the fact, that, although spoken of in text-books and extolled in monographs, this practice has never, to my knowledge, been described in proper detail, nor have its advocates defined with satisfying clearness all the conditions which should govern its employment. It has, therefore, been applied to unsuitable cases, its failure in which has brought it into undeserved disrepute. Again, American practitioners use the forceps so frequently, and so well, that they rarely hesitate in deciding upon them in preference to less severe means in any case of difficulty or delay. But it is a good rule, that the simplest and safest treatment is the best ; and this rule certainly applies to the use of one blade of the forceps as contrasted with the application of both.

I have, therefore, ventured to offer this new presentation of a well-known mode of treatment—asking for it a new trial at the hands of those whose skill and whose opportunities make their decisions authoritative—because I believe that its use will become more general, the more thoroughly its limitations as well as its advantages are discussed.

BROOKLYN ANATOMICAL AND SURGICAL CLUB.

Special Meeting, September 1st, 1879.—Continued.

The President, Dr. L. S. Pilcher, in the chair.

SARCOMA OF UPPER JAW—OPERATION.

Dr. Francis H. Stuart presented the specimen and showed the patient, of which the following is the history:

Mrs. M., age 60, born in England; was first seen July 25th, 1879. About a month before, she first noticed that biting with upper incisor teeth caused pain. Soon after she noticed some swelling of the gums about the two middle incisors. They began to be separated as the swelling increased. She also noticed a small tumor on the roof of the mouth, a little to the right of the median line, close behind the teeth. It was then about the size of a pea. It was not tender, nor did it bleed. When first seen there presented what is shown in Fig. 1, which represents the exact size and the relation of the parts, being a reproduction of the cast taken before the operation. The tumor was sessile, with a slight

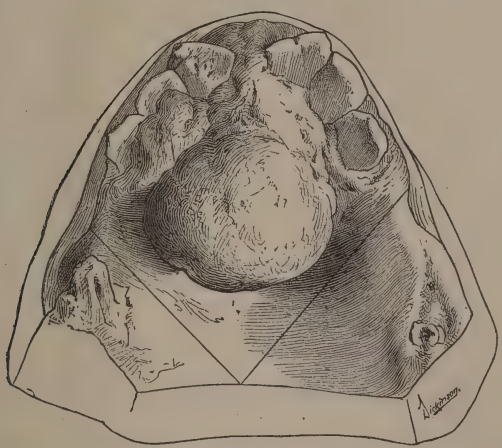

FIG. 1.—Sarcoma of Hard Palate.

constriction about the base at the posterior part, as is seen in Fig. 2, which represents a section made through the middle of the specimen after the operation. In these two figures the separation of the middle inci-

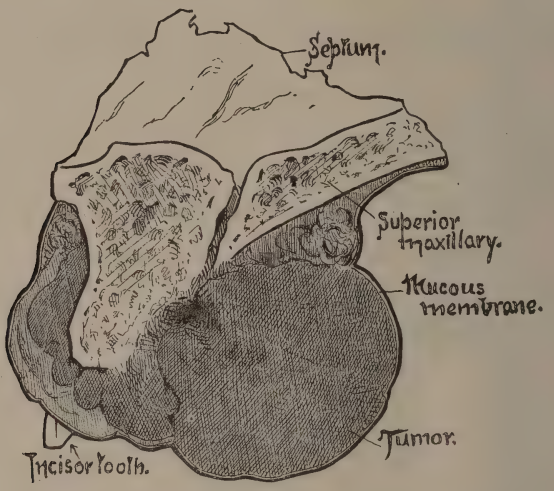

FIG. 2.—Longitudinal Section of Sarcoma of Hard Palate.

sors, the swelling about the teeth, both in front of and behind the teeth and the point upon the superior maxillary bone whence the tumor developed, are admirably shown. I am indebted to Mr. R. L. Dickinson, a medical student, for the drawings from which these cuts were made.

The tumor was denuded of epithelium, and was covered with a dirty-looking exudation. It was soft, pulpy to feel. It was not painful nor sensitive. The teeth were all loose. Speech was quite indistinct and mastication was much interfered with. The patient was in good general health.

The operation for removal was performed July 28th. There were present Drs. Ayres, Clarke, Skene and Wright, and Dr. Fry, dentist. It was performed in the following manner: The upper lip was lifted up, and with a scalpel passed under it, was freed from its attachment to the bone up to the floor of the nose. Then with a finger-saw the wedge-shaped portion of the roof of the mouth, including all of the diseased tissue as shown by the lines in Fig. 1, was sawn through. Next the nasal spine and vomer were cut by bone pliers. In this simple manner the entire diseased portion was easily removed. There was slight hemorrhage from a small artery in the bone on either side. This was readily controlled by styptic cotton held in place by a wedge-shaped piece of cork, which

was removed the same evening. The only after-treatment was washing out the mouth with a solution of salicylic acid in lime-water.

There being no external incision, the deformity was very slight. The patient is now in good health. The roof of the mouth is re-forming, and she will soon be able to have a plate with teeth fitted.

GEO. R. FOWLER, *Secretary.*

Stated Meeting, September 15th, 1879.

The President, Dr. L. S. Pilcher, in the Chair.

REPORT ON ABNORMITIES.

The accumulated specimens of abnormities and monstrosities in the museum of the Society were referred at the June meeting to Drs. B. F. Westbrook, Charles Jewett and L. S. Pilcher, as a committee for examination and report. They present the following report:

All the specimens submitted, with but one exception—that of the *cervical rib*—are examples of abnormities by defective development; the double monsters, though apparently abnormal by excess, are in reality extreme examples of defects in development by so much as in each case the fused product fails to present two perfect beings, the monster being not the result of the excessive or perverted development of one being, but the result of the fusion of two. The committee call attention to the fact that modern embryological investigations render it extremely improbable, despite the universal popular belief to the contrary, that maternal emotional influences can modify or arrest normal development and produce abnormities.

The following four classes of causes, formulated by Vogel ("The Pathological Anatomy of the Human Body," trans. by Day), are those to which, either single or combined, the abnormities under examination, as well as nearly every known variety of abnormity, may be referred:

1. *Abnormities of the generative matter of one or both parents.*

2. *Abnormities of the maternal organism.*

3. *Diseases and abnormal states of the membranes of the ovum and of the umbilical cord.*

4. *Diseases and mechanical injuries of the fœtus.*

Different specimens have been examined by the different members of the committee, who accordingly present individual reports.

REPORT I.—ACRANIA; MICROCEPHALUS; ATRESIA ŒSOPHAGI; UTERUS BICORNIS; ATRESIA ANI. By Dr. B. F. Westbrook.

Specimen I. Acranial Monster.—History: Premature birth at eighth month of utero-gestation. Donated by Dr. T. Frickenstein.

FIG. 1.—Acranial Monster.

Description: Its size is that of an infant who has accomplished the seventh month of development. The neck is short and thick, the face projecting forward and the chin resting upon the breast. The perpendicular portion of the frontal bone is absent above the superciliary eminences; there is also absence of the parietals, squamous portion of the temporals and of the neural arch of the occipital. The spheno-occipital angle is greatly increased, giving to the base of the skull the deformity peculiar to this class of monsters. (See Fig. 1.) The integument of the scalp is developed as high as are the cranial bones, and a growth of hair encircles its upper margin, in the form of a tonsure. The integument is continuous with a light membrane which stretches across the cranium, and which formed a delicate sac, filled with fluid, which was ruptured in the delivery. This membrane is continuous on its inferior aspect with a mass resembling, in the preserved specimen, areolar tissue. From the under surface of this illy developed mass are given off the rudimentary cranial nerves.

Passing downward, the vertebral canal is found to be in a condition similar to that of the cranium. The arches are entirely absent, and

stretching from one side to the other is a light membrane, continuous on its deep surface with a rudimentary spinal cord, from which are given off the spinal nerves. The nerves pass outward in pairs, and their posterior roots have ganglia upon them.

The remainder of the body of this fœtus is normally developed. It is of the female sex, as are the majority of acranial monsters.

Specimen II. Acranial Monstr.—History: Premature birth at seven months. Mother 43 years of age; robust, and had felt unusually well since impregnation. Had borne four living children previously. Donated by Dr. G. R. Kuhn.

Description: The fœtus has the size of one in the sixth month of development; it is somewhat shriveled and sodden in its appearance, as if it had been dead some time before its expulsion. In general the description given of the previous specimen is applicable to this one; the absence of the posterior arches of all the vertebræ is more complete, however, and there is no trace even of encephalon or spinal cord; in the intervertebral foramina appear plainly the beginning spinal nerves, which are traceable and well developed throughout their course. The abdomen has failed to close completely in front, so that a fissure of some size remains in the middle line, through which have escaped the greater part of the small intestines. The feet are in a state of talipes varus, and both hands are completely dislocated outwards and turned up along the radial margin of the forearm, to which they are adherent by their opposed margins; the lower extremity of the ulna makes a sharp projection below, which terminates the extremity.

Acrania belong to the second class of Buffon, the *monstra per defectum*, and are, according to Förster, the result of an intra-uterine inflammation or hydrops of the cephalo-rachidian cavity.

They are not viable, though when the cord and medulla are developed they have been known to live for a short time.

Specimen III. Microcephalus.—History: Born at full term; lived but a few hours after birth; had double talipes varus, a supernumerary finger on each hand; rudimentary globes in both orbits (*microphthalmus*), and double hare-lip. Specimen donated by Dr. Geo. R. Fowler.

Description: The cleaned and dried skull is the specimen deposited in the museum. The cranial bones are very thin and poorly developed; numerous points where membrane still persists are scattered over the cranial vault; the fontanelles are disproportionately large; the general shape of the cranium is pyramidal and its size small; the orbits are contracted in their vertical diameter to one centimetre (three-eighths of an inch). The orbital plates of the superior maxillary bones are wanting; the palate processes of the superior maxillary and the horizontal plates of the

palate bones are entirely wanting, producing complete absence of any hard palate; the right premaxillary bone is present and fully developed, and articulates with the anterior angle of the vomer.

Specimen IV. Uterus Bicornis.—History: This specimen was removed from the microcephalic fœtus last described.

Description: The uterus is normal in size and shape as far as to the middle of its body; here it bifurcates and presents two conical prolongations, which are continuous with the Fallopian tubes on either side. This deformity results from imperfect fusion of the ducts of Müller, an arrest of development. If these ducts fail to meet at all, there results the formation of two uteri, each with a single Fallopian tube and ovary; if the union is only partial, the result is a *uterus bicornis*, as in the present specimen.

Specimen V. Atresia Œsophagi.—History: Male child, well developed; weighed 8 pounds at birth; lived five days; attempts at swallowing always ineffectual, and productive of suffering. Specimen donated by Dr. L. S. Pilcher.

Description: At the autopsy the mouth and pharynx were found to be normal. In the specimen, the œsophagus, at the termination of its upper third, is contracted abruptly into an impervious muscular cord, which continues downward in the proper track of the organ for one centimetre, when it joins a second portion of the œsophagus, which has apparently been developed upward from the stomach as far as to a point 1.25 centimetres above the bifurcation of the trachea; here it blends with the posterior wall of the trachea, through which an opening exists by which free communication is established between the trachea and the lower œsophagus, so that a probe passed up the œsophagus from below merges above, through the glottis.

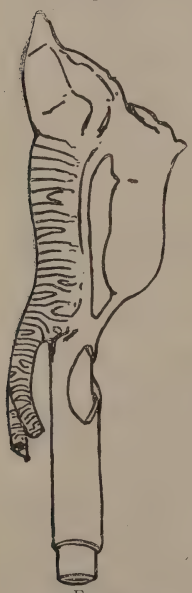

FIG. 2.
Atresia Œsophagi.

Atresia of the œsophagus is a comparatively rare abnormity. Vrolik, in his *Tabulæ ad illustr. embryog. hom. et mam.*, *Tab.* 89, depicts a case identical with this one; the child lived five days. The records of the London Pathological Society contain four cases. Holmes' Surgical Diseases of Children mentions three cases. In the *Annali di Medicina Milano*, Sept., 1871, is recorded yet another. In all these in which the lower part of the œsophagus is mentioned, it opened into the trachea. This abnormity is the result of an arrest of development simply.

The septum between the trachea and œsophagus, or between the latter and one of the primary bronchi, is undeveloped, and a communication remains; or the development of the tube from below upward, or from above downward, is not sufficient to cause a union of the two portions, and an intermediate fibrous cord is the result.

Specimen VI. Atresia Ani.—History: Well-developed female child, born at full term; slight external depression in skin at anal site; operation for relief attempted at close of third day; dissection carried along the curve of the sacrum for about 4 c m. (one and a half inches) without reaching the gut; a large trocar was then thrust in the supposed direction of the gut; it reached the gut, and a free evacution of meconium was effected; death from peritonitis resulted at end of twenty-four hours. Specimen donated by Dr. Charles Jewett.

Description: The rectum descends only as far as to the level of the cul-de-sac of Douglas; here it ends as a blind and dilated sac. The other pelvic organs are normal.

Atresia of the anus is one of the more common abnormities. In the city of Brooklyn, N. Y., during the year 1875, 14 deaths from this congenital abnormity occurred; during 1876, 10 additional deaths were recorded. In the Imperial Lying-in Hospital in Vienna, during the eight years ending December 31st, 1840, among 23,413 births, four cases of imperforate anus occurred. Besides being by no means infrequent in children who are otherwise well formed, it is a common accompaniment of other more extensive malformations. There may be a simple failure to communicate between the rectum and the anal depression; or, the rectum may be undeveloped; or, in the female, an opening may remain between the rectum and vagina; or, in the male, the rectum may communicate with the bladder or urethra. In these latter cases the septum has failed to completely divide the uro-genital sinus.

REPORT II.—FISSURA STERNI; ATLAS DEFECTIVUS; COSTA CERVICALIS. By Dr. Charles Jewett.

Specimen VII. Fissura Sterni.—History: See PROCEEDINGS, 1878, p. 350.

Description: This sternum, from the body of the late Dr. E. A. Groux, presents a complete median fissure of the bone. There is little or no deficiency of bony substance, the malformation resulting simply from failure of union between its lateral halves. The bony segments deviate somewhat in relative size from their usual proportions, as will be seen in the accompanying figure. The two halves of the cleft bone are separated by an interval of one inch at the level of the first costal cartilage. The width of the cleft at the widest part, the junction of the upper and middle thirds, is one inch and four-tenths. Below, the

lateral halves of the sternum are united by an arthrodial joint. This joint is limited to the lower segment of the gladiolus, connecting its opposite halves. The cartilages which invest the articular surfaces blend below with the xiphoid appendix. The costo-sternal articulations are normally disposed, except the fifth, sixth and seventh. These are placed higher than usual, so that the seventh costo-sternal articulation falls at the junction of the third and fourth segments of the gladiolus.

FIG. 3.—Fissura Sterni.

Specimens VIII and IX. Atlas Defectivus.—History: Removed from subjects in the anatomical laboratory of the Society.

Description: These two specimens of defective atlas exhibit a median cleft in the posterior arch one-half inch in width. The bones are otherwise normal.

Spinal fissure may be posterior, anterior, lateral, or a complete antero-posterior division of the vertebral column. The first is the most common variety of this abnormity.

Posterior spinal fissure may result merely from failure of the vertebra laminæ to unite in the median line, though fully developed, or from imperfect development of the laminæ. The specimens presented belong to the latter class. The higher grades of this malformation are usually complicated with errors of development in other parts.

Humphry affirms that he "cannot call to mind any instance of decided failure in the development of a portion of the skeleton without its being attended with a proportionate, or nearly proportionate, failure in the development of the contiguous overlying or underlying soft parts. In spina bifida the deficiency in the vertebral arches is always associated with some deficiency or aberration in the cord, the skin being also generally imperfect." We have a striking illustration of these facts in the case of the acranial monster donated by Dr. Kuhn. In this case there is an entire absence of the posterior vertebral arches throughout the spine. The fissure involves the integument, and the spinal cord and its

membranes, as well as the brain, are wholly wanting. Ectopia of the intestines, club feet and hands, still further complicate the case.

The arches of the lower lumbar and upper sacral vertebræ are the last to unite, their closure occurring at about the fourth or fifth year of life. This point is therefore the most frequent seat of spina bifida. The arches of the upper two cervical vertebræ, next to those of the lumbo-sacral region, remain longest unclosed.

Fissure of these vertebræ is accordingly of somewhat frequent occurrence. Meckel states that "when the osseous system alone is affected, the first cervical vertebra furnishes the most numerous instances of this anomaly."

In the subjects from which these specimens were taken no other abnormity was noted.

Specimen X. Costa Cervicalis.—History: Removed from female subject in the anatomical laboratory of the Society.

Description: The case presented is one of a single rib on the right side of the seventh cervical vertebra. It is about one-half the length of the first rib, and is floating. I find no reported case of cervical ribs springing from vertebræ above the seventh. That such cases may occur is probable, from the fact that Meckel "found in a child of nine months separate nuclei for part of the transverse process of the sixth, fifth and second cervical vertebræ." Blandin also found these "costiform epiphyses in the third, fifth and sixth cervical vertebræ of each of three fœtuses, at three, four and five months respectively."

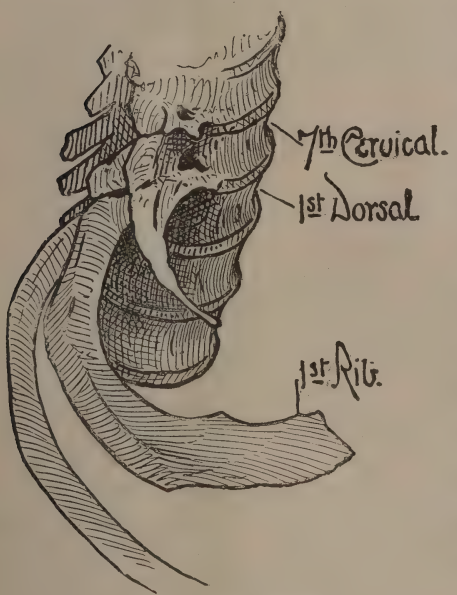

FIG. 4.—Costa Cervicalis.

Supernumerary ribs occur as follows: The cervical vertebræ have two transverse processes on either side, one in front of the other. The anterior transverse process of the seventh cervical vertebra is developed from a separate nucleus, which corresponds to the head and neck of a rib. This usually unites with the rest of the vertebra about the fifth year. Occasionally this nucleus remains separate, and

growing beyond its proper limits, forms a cervical rib. It is usually parallel with the first true rib and rarely extends half its length. Its anterior extremity is sometimes joined to a process growing from the upper surface of the first rib. Very rarely it reaches the sternum, either having its own cartilage or uniting with that of the first true rib. The transverse process of the first lumbar vertebra sometimes remains separate, exceeds its ordinary growth and forms a lumbar rib.

The subjects of spinal fissure and supernumerary ribs will be found more fully treated in Humphry on the Human Skeleton; Meckel's Anatomy; St. Hilaire, *Traité de Teratologie*, and Förster, *Die Missbildungen des Menschen*, from which the above facts were mainly drawn.

NOTE.—The Report on the double monsters will appear in the next number. GEO. R. FOWLER, *Secretary*.

BROOKLYN PATHOLOGICAL SOCIETY.

Regular Meeting, September 11th, 1879.

The President in the chair.

MELANO-SARCOMA.

Dr. Sherwell presented a tumor removed from a lady, æt. 24, brunette, married. The early history was that she had been struck on the forehead when a child by a sharp-pointed stone thrown by another child. For some years has been able to feel a small tumor under the scar. It did not cause any deformity, and was movable under the skin. For the last three months it had increased rapidly in size, and from its prominent position gave great annoyance and some discomfort. The doctor saw her first on September 8th, and advised removal. Was assisted in the operation by Drs. Wunderlich and Minor.

The tumor was about the size of a large bean when removed, dark-colored, hard, attached both to the scar and to the periosteum of the subjacent bone. There was a depression in the bone ; the external table appears to have been fractured.

Submitted the tumor for microscopical examination in regard to the prognosis of the case.

CARCINOMA OF ABDOMEN.

Dr. Westbrook presented the stomach, liver, pancreas and spleen from a man, æt. 50, who had died in the Long Island College Hospital.

The subject was a Swedish sailor, who, a few months ago, had shipped as an able-bodied seaman, but was able to do duty but a short time. On admission to the hospital, a few weeks before death, he was suffering from inability to retain food in his stomach, great debility and emaciation, with œdema of the lower extremities and dropsy of the abdomen. He died of exhaustion.

At the autopsy the *pancreas* was extensively infiltrated and greatly enlarged. The fundus and cardia of the *stomach* were much thickened from cancerous growth, the interior presenting a fungating appearance. The *spleen* was greatly enlarged, and contained many cancerous nodules, from the size of a pea to that of an orange. The cancerous mass on the concavity of the spleen was directly continuous with that involving the fundus of the stomach. The *liver* contained a few globular masses. The peritoneal cavity was filled with serum, the dropsy having been caused by pressure of the enlarged head of the pancreas upon the portal vein.

Regular Meeting, September 25th.

The President in the chair.

The Microscopical Committee reported that the tumor presented at the last meeting by Dr. Sherwell was a *melanotic sarcoma.* Also, that Dr. Westbrook's tumor of the abdominal viscera was to be classed as carcinoma.

HYDRENCEPHALOCELE.

Dr. H. N. Read presented a photograph illustrating the deformity in the following case. (See Fig.) When first seen by him the child was nine months old and bottle fed. The child was much atrophied and screamed incessantly. The tumor was present at birth, but much

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smaller. When first seen by the doctor it measured 16½ inches in its vertical circumference, by 11¾ inches in the horizontal.

It was attached to the head, in the occipital region, by a pedicle about 2 inches in diameter. It was very tense, fluctuating, pink in color; the base covered by hair, the remainder bare and resembling the scalp in its texture. The skin was thin and the veins prominent. The tumor, which was much larger than the child's head, was supported on a pillow. The slightest movement was painful. It had already been tapped twice. The doctor tapped it once, and drew off 1½ pints of serum, clear at first, afterwards pinkish from the intermixture of blood. It refilled very rapidly. The tapping was followed by great relief from the pain. The child died from exhaustion, following upon convulsions, one month after the tapping.

At the autopsy, made by Dr. B. F. Westbrook, the tumor was found to be composed externally of a tegumentary covering, lined by a firm connective tissue continuous with the pericranium and dura mater, and, internally, of a soft cerebriform mass, containing in its interior a number of cysts; the brain-like matter was continuous with the gray and white matter of the posterior lobes of the cerebrum. None of the cavities in its interior communicated with the ventricular cavities. The ventricles and ganglia of the brain were displaced backwards, and the anterior portion of the fossæ, together with the space beneath the pons and medulla (which were raised from the base of the skull), filled with serous fluid. Owing to the backward and upward displacement of the basal ganglia, the cranial nerves were all put upon the stretch and elongated. The fissure of the skull was in the region of the posterior fontanelle. The lower portion of the occipital bone was intact. The other viscera presented no abnormity. The tumor was not examined minutely, as the friends did not allow it to be removed.

Dr. Bunker presented microscopical slides from Dr. Sherwell's *melano-sarcoma.*

UTERINE MYOMA.

Dr. Freeman presented a large tumor from the cavity of the uterus.

History: "In May last was called in consultation by Dr. Franklin to see Mrs. ——, widow, aged 45, native of England. She was very much debilitated and exsanguinated from severe and frequent metrorrhagia during the last three years. On examination the uterus was found enlarged, the os being over two inches in diameter and with a rounded surface, with a slight indentation or fissure near the posterior margin. Into this a probe could be passed to the depth of 5½ inches. The examination satisfied me that a tumor was filling the uterus and protruding at the os, though it was so blended with the uterine tissue that the line of

demarkation between the tumor and the os uteri could not be made out by sight or touch. Two days later I removed this tumor with the aid of Drs. Franklin, Byrne, Bunker and Rockwell.

"It was separated with much difficulty by means of blunt instruments and the fingers and traction. When removed it measured 5½ inches in length and 3½ across, and showed no sign of any pedicle, having been attached on all sides to the uterine tissue, except a narrow space at the posterior part." The doctor had seen the patient a few days ago. The uterus was then in about its normal condition and the patient was feeling well.

Dr. Read referred to a case related by Goodell, in which, after freeing the tumor from its attachments, it was necessary to deliver it with forceps.

Dr. Freeman: In this case the os was already dilated and the only difficulty was in the enucleation. There was very little hemorrhage either during or after the operation. The tumor was surrounded by a capsule.

Regular Meeting, Oct. 9th.

The President in the chair.

The Microscopical Committee reported that the tumor presented by Dr. Freeman was a fibroma, or, more properly speaking, a myoma of the uterus. Slides illustrating the histology were presented.

Dr. Bunker presented for Dr. Merritt a specimen of ulceration of the small intestine. No history was given.

EXTRA-UTERINE PREGNANCY.

Dr. H. N. Read presented part of a fœtal occipital bone, passed per anum by a German woman, three years subsequent to the period of the completion of abdominal gestation. Another mass said to have been passed at the same time was also presented, but was not identified as a portion of the human body. (*A full report of this case will appear in the next number of the* PROCEEDINGS.)

The Curator would be pleased to receive correspondence in regard to the exchange of microscopical slides. Address Dr. E. S. Bunker, No. 280 Henry St., Brooklyn.

☞*The Secretary requests members presenting specimens to present therewith a written account of the history and pathological appearances.*

BENJ. F. WESTBROOK, *Secretary.*

Ἀσκληπιὸς ὁ Σωτὴρ

Χαρμα μέγ' ανθρωποισι, κακων θελκτῆρ' οδυναων.

Hymns of Homer, No. XVI.

PROLIFERATIONS.

——Manuals Wanted.—Any member having a spare copy of the Manual of this Society (1872), will favor us by sending it to the Rooms.

——Abolition of Coroners.—An effort will be made in the Legislature this year to abolish the coroner system. In Richmond County the bills of one of the coroners amounted to more than the entire cost of the Board of Health, which the politicians dispensed with on the ground of its expensiveness. It has been stated that in that county not more than one in a hundred of the inquests held is necessary.

——Dipsomania is said to be relatively under control when a farinaceous diet is employed. Among the articles which is specified by Charles Napier, an English scientist, as antagonistic to alcohol, are macaroni, haricot beans, dried peas and lentils, well boiled and seasoned with butter or olive oil. It is claimed that the carbon thus ingested renders unnecessary, and therefore repels, the carbon in the alcoholic beverages. It is stated that confirmed drunkards, and those brought to death's door by their habits, have been fully cured by a proper farinaceous regimen.—*Canadian Journal Med. Sc.*

——Croup and Diphtheria.—A sub-committee of the Royal Medical and Chirurgical Society, appointed about two years ago, has reported recently, *British Medical Journal*, May 24, certain conclusions pointing towards the duality of these diseases. In the course of the discussion upon the report the contrary opinions of several members were expressed. Dr. Thorne-Thorne made some significant remarks concerning several outbreaks of diphtheria he had been called upon to investigate. In these he had found that the earlier cases referred to croup and the later ones to diphtheria. At first cases of sore throat prevailed over an area more or less extensive. Then groups of cases occurred in which the dis-

ease was clearly infectious; later on there would be severe cases with more or less membranous exudation in fauces; and at last, perhaps in a single village in this area, there would be a severe and fatal outbreak of diphtheria—indicative of a *crescendo* movement by reason of repeated propagation. He thought that diphtheritic poison was a specific one, but that it had not acquired the stability met with in small-pox, measles, etc. Unless controlled, the infective property may, by progressive development, acquire the persistency of the more stable poisons. At present the poison, even when developed, tended to revert to a former and more innocent type. Without binding himself to the opinion that every membrane in trachea or larynx was diphtheritic, he felt certain that the majority of cases of membranous croup were diphtheritic in their nature.

——Work and Play.—A recent writer has declared that there is no just discrimination between work and play except that of sentiment only. If life pursued its even tenor, there could be no question as to recreation after labor; the two would be identical. This, it is claimed, was true of that brilliant era of classic Greece, when man attained so nearly to the ideal, both of mind and body. In the occupation of the joyous Grecian there was no such thing as work or play, but only life.

——Winckel's Disease.—A new disease is described by Dr. Winckel, of Dresden. It occurred among new-born infants in the Lying-in Hospital. It was marked by both cyanosis and jaundice, and was very fatal, 19 dying out of 23 attacked. The descriptive name employed by Dr. W. was "cyanosis afebrilis icterica perniciosa cum hemo-globinuria," but it has already been suggested that morbus Winckelii will be that adopted.—*Deutsche med. Wochenschrift.*

——Easy Catheterization.—A French surgeon advises to oil the patient, instead of the instrument. He injects oil into the urethra, and finds the friction and irritation are greatly reduced, as the instrument passes, so to speak, by its own weight.

——Medical Students' Hysteria.—During the fortnight following the death of the late Napoleon, Sir James Paget was consulted for stone in the bladder by no less than four gentlemen who had nothing the matter with them. This leads me to speak of a form of hysteria which is frequent in males, and perhaps more so in our own profession than in any other class of people. How many students are there of one year's standing or more in this hospital or any other who have not imagined that they were the victims of some fatal disease. I myself, when a student, was convinced that I had both heart disease and phthisis. . . . . Scores of students consult yearly their medical preceptors for complaints of which they have not the first symptom.—Mr. P. Horrocks.

WILLIAM K. BROWN, M.D., was born in Boston, July 8th, 1807. He was the eldest of four children. His father and grandfather were merchants, and held a high social position in their native city. His grandfather filled many positions of trust and honor in State and municipal affairs. For nearly a hundred years the family owned a country residence at Waltham, about ten miles from Boston.

When less than six years of age the subject of this sketch was sent to school at Beverly, Mass. Here, on the 1st of June, 1813, he saw the naval battle between the Chesapeake and the Shannon. This made so strong an impression on his mind, even at so early an age, that often in after years he was wont to describe the incidents of the encounter, and the feelings inspired by the grand and terrible spectacle.

From the school at Beverly young Brown was sent to the Framingham Academy, where he was prepared for college. He entered Harvard, but for reasons unknown did not complete the course. Deciding on medicine as a profession, he was graduated at Dartmouth in 1829. The next year he settled in Portland, Me., and two years after married Miss Eliza Hooper, of Marblehead, Mass. His wife's health becoming much impaired, he moved to Philadelphia in 1834, to escape the rigor of a northern climate. Her death in 1836, together with the loss of their two children, so weighed on his mind that he was incapacitated for business of any kind, much more for the practice of medicine.

In December, 1839, he married Miss Sarah H. Walley, of Boston, and early the following spring sailed with her for Europe. His purpose being to perfect himself in the healing art, he proceeeded directly to Paris, the centre of medical lore fifty years since, and there prosecuted his studies with great assiduity for two years, under such teachers as Velpeau, Andral and Dubois—advantages seldom enjoyed at that day by an American physician. In December, 1841, a few months after his return home, he came to this city, and soon located himself at the corner of Remsen and Henry Streets, in the house that recently gave place to the more modern structure built by the late Dr. Giberson. At that time Remsen Street had not been opened beyond Henry Street, and only two houses were in the neighborhood of his office. There was an unobstructed view over cultivated fields to Washington Street. The settled part of the city lay contiguous to Fulton, Catharine and Jackson Ferries. Every one thought that his location was too far out of town. The churches then built were the First Presbyterian—Dr. Cox's—in Orange St.; the Second Presbyterian—Dr. Spencer's—in Clinton St., and the German, in Henry Street. The population was only twenty-five thousand, and the tone of the inhabitants that of an inland provincial village. The place, in fact, was a mere offshoot of New York City, and could not boast of a single public building. The physicians of that day were Drs. Wendell, Geo. Gilfillan, Rowland, Willsher, Van Linderen, Garrison, Rapelye, Fanning, Hyde, F. W. Ostrander, W. G. Hunt, King, Marvin, Mason, Cooke, McClellan and Benjamin.

The doctor, having built for himself a more commodious house on the corner of Montague and Henry Streets, removed to it in 1847. Here, almost within speaking distance of his first location, he continued to reside until his death, a period of nearly 32 years.

The doctor was a member of the Kings County Medical Society, and of the Academy of Medicine of New York City. On coming to Brooklyn he joined the Second Presbyterian Church; but after the death of Dr. Spencer, the Congregational Church, then rising rapidly in general favor, under the ministration of the then young and eloquent preacher, Dr. Storrs.

The doctor's ancestors on both sides for the two or three generations preceding him

were residents of Boston and its vicinity. On the paternal side, as before mentioned, they had a homestead at Waltham, 10 miles out of the city, for nearly a century; and, on the maternal, one at Framingham, for even a longer period. A few years since both yielded to time and change, and, passing into other hands, have succumbed to modern improvements.

At Beverly and at Framingham the doctor's mind was developed into a great fondness for nature in all of its varied manifestations, but particularly in the direction of the animal kingdom. He was never tired of studying the habits, instincts and peculiarities of every living thing that came under his observation. Even reptiles, so disgusting and repulsive to most persons, were not beneath his notice. While in France he unwittingly was the cause of a profound sensation at the dinner-table. A snake which he had captured on an excursion into the country, and deposited in his coat pocket for transportation to his rooms, suddenly showed its head and forked tongue to the assembled guests. The doctor was so familiar with companions of this sort, that he forgot, at the sound of the bell, the fresh acquisition in natural history coiled up in his pocket.

In later years, when the microscope had come into use amongst physicians, he was equally devoted to the study of the miniature world that swarm in every stagnant pool.

In his case, as in that of many others, taste and inclination did not lead the way to his profession. These studies were sources of amusement merely, while the born naturalist was being educated in the practical details of our unpoetic profession.

The doctor at first, like most young men, took a fancy to surgery. During his residence at Portland he tied the carotid artery—an operation of some little importance at that day—and soon after his arrival in Brooklyn he successfully amputated a girl's leg that had just been crushed by the cars of the L. I. R. R. This was done under the most adverse conditions, and with the rudest appliances—a pocket knife, a meat saw, the light of a lantern and the assistance of a brakeman. The doctor, unaware of the nature of the accident, found himself far out of town at night, with the girl's life on his hands, and the call to prompt action imperative. He was equal to the emergency. Hospitals, ambulances and anæsthetics were of the future. A distant shanty for a home, a shutter to carry the patient there, and suffering lasting as long as the mangled limb remained unamputated, were of the present.

As time passed, however, and many families of the better class became his patrons, the practice of medicine proved itself far more to his liking than that of surgery. The position which he held amongst his patients was singularly close and intimate, such as is rarely the good fortune of any practitioner to secure. They regarded him not only as a physician, but as a friend who had their welfare at heart.

The children born in these long years, under his care, looked up to him as a father, and forgot in this tender relation the prescriber of nauseous drugs and the visitor in the sick-room. Being always true to his high mission, he enjoyed the confidence and esteem of his patients to such a degree that, at his retirement, there seemed to be a vacancy in the household, and at his death the loss of one of their number.

Besides this personal interest in his patients, there was another element in the doctor's success; he was a cautious practitioner, not putting every new theory on trial, and yet always keeping abreast of all real advances in the medical art. Then, again, he was circumspect in the use of drugs, and fearful of a reducing treatment, but confident in the natural forces, and reliant on sustaining measures—a method of practice in his earlier years rejected by all, and in his later appreciated by few. The result, however, was more than gratifying. Diet and care in infantile diseases, and gentler remedies in the sick-room, were wonderfully successful, and gave the doctor an enviable reputation.

Dr. Brown was simple in his tastes, domestic in his habits, kind in his feelings, polite in his address, conservative in his views and devout in his nature. He was the old type of the cultured physician and the Christian gentleman, a class of men now, unfortunately, passing from the stage. To him the requital of his services was not a fee, but an honorarium. He was too modest in his demands for compensation, however rich the person might be ; and to those in straitened circumstances he never rendered a bill, though requested again and again. To this latter habit (the former never gave rise to the slightest trouble) many took offense, as they disliked to be placed on the poor list.

The doctor did not push himself forward in public affairs, or enter the race for professional honors. To him the attachment of his own family, and that of the many families gathered around him in years of faithful service, were the highest of his aspirations. Having adopted this, the true philosophy—to act well the part assigned him, and fill the measure of his years with usefulness—he passed an uneventful but happy life, and died regretted by all who had known him intimately.

The doctor came of a hardy, long-lived race, and if an accident that befell him some five years since had not occurred, his life would, in all probability, have been prolonged to a ripe old age. Stepping from a street car while it was in motion, he fell to the ground, and struck his forehead on the cobble-stones. His injuries were apparently slight, not even a flesh wound being inflicted, and yet, after awhile, his left lower extremity began to be painful and clumsy. As the nervous irritability, which was very troublesome several months, decreased, the muscular atony increased ; and when this irritability ceased locomotion was well nigh impracticable. His infirmity had made such progress four years since that he was obliged to retire from practice.

Early the past winter paralysis of the soft palate declared itself as he awoke one morning. At that time his general health, which had not hitherto been seriously impaired, began to give way. He suffered much from anorexia, dyspepsia, constipation, nervousness and insomnia. At intervals there were seizures of mental and nervous excitement, attended with a rush of blood to the head and a deep flush of the face, sure indications of the rising tide that was soon to overflow his brain and submerse all his faculties. During these attacks he was irritable, perverse and uncontrollable; reason had lost its sway. These symptoms subsiding in an hour or two, he would settle back into his usual quiet state, in which his mind worked slowly but correctly. Save these flashes of excitement his mental faculties were preserved in a remarkable degree to the last.

In June he improved so much that he was able to ride and walk out on several occasions. Being encouraged by this favorable change, he was so certain that the air at the sea-coast would give him renewed strength, that he went with his family, the last of June, to Naragansett Pier. As he had hoped, the ocean breezes imparted new vigor. He ate and slept well, and seemed to enjoy all about him. The 4th of July, while at breakfast, he suddenly fell back in his chair, and died in a few hours, just four days previous to the completion of his 73d year. Thus one of our oldest members, after a long and busy career that was filled with honest, faithful, benevolent work in the cause of humanity, passed from this mortal life here to that immortal life beyond.

E. N. Chapman, M.D.,
J. S. Thorne, M.D., } *Committee.*

—— The Regular Monthly Meetings of the Medical Society of the County of Kings are held at 8 P. M. on the third Tuesday of each month at Everett Hall, 398 Fulton Street.

The November meeting will be held on the 18th, at which there will be presented the following papers :

The adjourned discussion of Dr. Armor's paper on the "Symptoms and Signs of the Precursory Stage of Constitutional Phthisis," read before the Society Dec. 1878, and published in the Proceedings for January, 1879.

Discussion opened by Dr. Armor.
Phthisis in its Throat Complications, by Dr. Sherwell.
Phthisis as it affects the Nervous System, by Dr. Shaw.
Phthisis in Gynæcological Practice, by Dr. Skene.
Phthisis in Children, by Dr. Walker.
Phthisis, its Pathology and Bibliography, by Dr. Sizer.
General Discussion by members of the Society.

A Ready Method of Testing Pepsin, by Dr. J. Merritt.

——New Members.—At the October meeting, Drs. E. J. Carolan, Bellevue, 1878; F. Madden, L. I. C. H., 1879; P. A. Zeppenfeldt, Bellevue, 1879; J. Meyer, C. P. S. N. Y., 1877, and J. A. M. Kene, Univ. N. Y., 1878, were elected. Dr. J. G. Gleavy, 74 St. Mark's Place, was proposed for membership.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

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Vice-President.....C. Jewett, M.D., 310 Gates Ave.
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DELEGATES TO THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

(1878 to 1882.)

Drs. J. C. Shaw,	Drs. A. J. C. Skene,	Drs. E. N. Chapman,
J. D. Rushmore,	G. G. Hopkins,	J. S. Prout,
R. M. Wyckoff,	A. Mathewson,	F. W. Rockwell.

Chap. XI, Art. 2, of By-laws: "Any Member elected as Delegate to the Medical Society of the State of New York, who shall be unable to act as Delegate during two successive years, shall be considered to have vacated his position as Delegate."

COMMITTEES OF THE SOCIETY.

HYGIENE.

Drs. T. P. Corbally, J. Walker, W. E. Griffiths, B. Edson, A. W. Ford.

REGISTRATION.

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W. E. Griffiths,	N. Matson,	A. S. Clarke,
J. A. Jenkins,	F. W. Rockwell.	

PUBLIC INSTRUCTION.

Drs. A. J. C. Skene, C. L. Mitchell, E. R. Squibb, J. T. Conkling, J. C. Hutchison.

PHYSICIANS' MUTUAL AID ASSOCIATION.

Drs. B. A. Segur, W. W. Reese, J. H. H. Burge, A. Hutchins, W. G. Russell.

PROCEEDINGS

OF THE

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

STATED MEETING, NOVEMBER 18, 1879.

THE ADJOURNED DISCUSSION OF DR. ARMOR'S PAPER ON THE "SYMPTOMS AND SIGNS OF THE PRECURSORY STAGE OF CONSTITUTIONAL PHTHISIS," READ BEFORE THE SOCIETY, DECEMBER, 1878, AND PUBLISHED IN THE "PROCEEDINGS" FOR JANUARY, 1879.

DR. S. G. ARMOR, in opening the discussion, briefly recapitulated some of the points presented in his former paper. The points discussed in the paper were mainly these: *Can the precursory stage of phthisis be recognized with any degree of certainty? And, if so, by what means?*

He regarded this as an intensely interesting subject, and was glad that his imperfect presentation of it had the effect, at least, of stimulating others to enter this field of inquiry.

His line of discussion, in his former paper, had led him to the consideration of but one variety of pulmonary consumption, namely, that which stands directly related to a DIATHESIS; in other words, the *true tubercular variety*. For a long time, this was the only recognized form of pulmonary consumption, and that such forms of phthisis still exist, was never, he believed, more clearly recognized than to-day. But he regarded the more recent distinction into the constitutional, acquired and pneumonic varieties as one of the grandest triumphs of modern medical science. Its practical results can scarcely be over-estimated. *Sub-acute constitutional phthisis* differs from all other recognized varieties, in the fact that

the *constitutional symptoms precede the local.* It has a well-marked *diathesis*, a diathesis that brings with it low tissue producing power that tends to degeneration.

The relation of scrofulosis to this and other forms of consumption has long been a matter of debate. Good and careful observers are found arrayed on both sides of the question. The Laennic school, which was long the predominating one, regarded tubercle in the light of a unity. With them "phthisis always depends upon tubercle." Dr. Armor inclines to the dualistic and more modern view of the subject, and believes that the scrofulous cachexia has much to do with the development of pulmonary consumption. We cannot fail to observe, however, he said, that there is much confusion in the use of the term scrofulosis. If we recognize but one manifestation of the disease—notably that which is connected with "chronic inflammation and persistent enlargement of lymphatic glands"—there can scarcely fail to be confusion in the discussion of the subject. Like pulmonary consumption, the disease may be either congenital or acquired after birth. The hereditary form of the disease (often regarded as tuberculous, and certainly closely allied to it) is not unfrequently observed to follow certain constitutional maladies of parents. Parents who suffer from tertiary syphilis, or who are tuberculous, or who are feeble and broken down from any cause, are apt to beget scrofulous children.

On the other hand, the disease may be acquired after birth, from influences which arrest healthy development of the system in the first years of life, such as improper nourishment, want of fresh air, and general antihygienic influences.

Two forms of scrofula, then, are clinically recognized—the one hereditary, the other acquired. And it is equally well established that the so-called "scrofulous habit" manifests itself in almost opposite states of the system; sometimes there is an over-production of fat, associated with an indolent process of constructive and distinctive assimilation. The patient is phlegmatic, gross, and sluggish in his organization, with tendency to non-inflammatory engorgement of his lymphatic glands. In the other form the patient is delicate, slender, the muscles are thin and soft, the skin white and easily flushed, the hair soft, and the pupils usually somewhat enlarged, with a bluish, transparent tint of the sclerotica. Authors have classified these distinct forms of scrofula into the *torpid* and *erithitic* varieties; and their recognition has, if nothing more, at least important therapeutic bearings. In one form of the disease, cod liver oil is of signal service. In the torpid variety, with soft and flabby muscles, enlarged lymphatic glands, and superabundance of fat in the subcutaneous cellular tissue, cod liver oil is worse than useless; here iodine and its preparations are peculiarly beneficial.

The tendency to the formation of cheesy masses in scrofulous inflammation has long been observed. For a time they were regarded as characteristic of the tubercular nature of the disease. Indeed, they were believed to be infiltrated tubercular matter. We now believe, however, that this caseous metamorphosis may occur in chronic forms of inflammation in all cachectic states of the system, and for this reason all conditions of mal-nutrition predispose to the formation of tubercle. The formation of tubercle is a secondary condition. Hence the close relationship of scrofula to tubercular consumption.

But the most important practical question, after all, in the discussion of this question, relates to the *accidental* and *pneumonic* varieties of the disease; for, in the order of frequency, true tubercular phthisis is a disease of comparatively rare occurrence.

In the pneumonic form of consumption, it will be remembered as an important distinction, that the *local symptoms take precedence of the constitutional.* The difficulty is primarily and essentially an inflammatory affection. In some instances the inflammation may be slow, sub-acute, almost chronic, giving rise to what is known as chronic interstitial pneumonia; in other cases it may be active, acute, and distinctive in its effects, giving rise to the true "galloping consumption" of our forefathers. This is a very common form of consumption; perhaps the most common; although, as we shall see, opinions differ on this subject.

Since the publication of his paper on the Pretubercular Stage of Phthisis, Dr. Armor said that he had read with interest a paper presented to the New York Academy of Medicine by Dr. J. R. Leaming, of New York, an able and distinguished practitioner of that city. In the paper referred to, Dr. Leaming claims that a large proportion of cases of pulmonary consumption—using the term in its broader sense—arise from fibroid degeneration of the lung; this form of consumption being known as "*Fibroid Phthisis.*" His views are peculiar in this: that he supposes *pleurisy*, general or local, is the prime factor in the production of this fibroid degeneration of the lung, which leads, finally, to consumption of the lung. As to the frequency of this form of consumption, he makes use of this strong statement, namely, that "nine-tenths of all forms of phthisis commence with plastic exudation, which is removable, when fresh, by proper management"; which proper management, in his estimation, consists in regulated, systematic and occasionally forced expansion of the chest in the open air, with milk diet in large quantities—two to three quarts in twenty-four hours—and, when the adhesions are extensive, he insists on mercurialization to the point of slight salivation. His favorite combination is Dover's powder and calomel. If the lung, however, has become involved in the fibroid degeneration, he prefers the bichloride of mercury, with tonics.

Dr. Armor is inclined to the opinion that this chronic form of phthisis is more common than has been heretofore supposed. Dr. Andrew Clark, of London, Physician to the London Hospital for Diseases of the Chest, gives it much prominence as a cause of pulmonary consumption. As to the cause of this fibroid condition of the lung, he says: "It may be pleurisy, very often it is so; it may be pneumonia, which has been unabsorbed and converted into a fibroid mass, or it may be an irreducible recurring bronchitis which has caused the development of fibroid tissue; and, lastly, but rarely, it may be due to some constitutional disease, such as syphilis or cancer."

The clinical history of this form of the disease, in its early history, is quite characteristic: 1st, It is, as a rule (excepting the primary pleuritic inflammation), a non-febrile affection. It is essentially chronic in character, the general health at first being but little disturbed; and 2d, In a very large proportion of cases (ninety-nine in a hundred) it is a unilateral affection; while tubercular phthisis is almost invariably, sooner or later, bi-lateral. When it results from pleurisy, which is perhaps the most common cause, the physical signs are "soft, tearing, crepitant, and sub-crepitant râles, near the ear, often present without any expectoration or cough, and heard in the same place from day to day."—LEAMING.

These extra pulmonary râles are frequently mistaken for intra-pulmonary sub-mucous and sub-crepitant râles; they are certainly remarkably similar, and it requires a skillfully-trained ear to separate the one from the other. They may be distinguished, however, by their marked superficial character—they are heard directly beneath the ear; moreover, they are not changed in character or location by the expectoration or coughing of the patient.

Of the catarrhal form of phthisis Dr. Armor had nothing to say at present, further than that catarrhal pneumonia leads to catarrhal phthisis. It is a common form of the disease, sustains a close relation to the scrofulous habit of body, and, unlike the form just alluded to, it is generally pretty rapid in its course—the patient having prominent febrile and other constitutional disturbances, almost from the first.

PHTHISIS AS IT AFFECTS THE NERVOUS SYSTEM.

BY J. C. SHAW, M.D.

I shall not consider the entire subject of Tuberculosis, as it affects the nervous system, in the brief remarks which I shall make.

Tubercular disease affects the nervous system in a variety of ways; it is most frequent in youth. We have it as distinct tumors of the brain and spinal cord; but the brain is the most often affected. Of its location, the cerebral cortex and the cerebellum are most often its seat, but it may occur almost anywhere. They are often not confined to the cortex, but may have their seat in the medullary substance, and this is notably the case when it involves the cerebellum. We would be most apt to find it in persons with a predisposition to tubercular disease, but as a fact it is sometimes seen in young persons in whom there appears no reason to suspect such a predisposition; in such cases the symptomatology does not differ from that produced by tumors of other pathological formations, because the symptoms are dependent mainly upon the part of the nervous system interfered with; the regional and pathological diagnosis are, therefore, two separate questions to be answered when we see such a case.

This applies equally to the brain and spinal cord.

I have seen two cases of tubercular disease of the lung, accompanied by acute maniacal attacks, in which the patient had hallucinations of sight and hearing, the duration of attacks being from six to twelve hours, and then passing off; there was evidently no tubercular disease of the brain at this time; the attacks, doubtless, were due to a form of passive hyperæmia, from interference with the passage of blood through the lungs, and possibly from the additional factor of imperfect oxidation of the blood.

Tubercular meningitis, in its ordinary form, is so familiar to you all, that I will not take up your time by even alluding to its symptomatology, but will speak of what might be called anomalous cases. We now know that a child may suddenly become hemiplegic, or have paralysis of one arm, or the facial muscles of one side, one or more eye muscles, without having presented any marked symptoms previously, and these symptoms brought on so suddenly, be the result of tubercular disease, and subsequently present all the clinical history of this unfavorable condition. We therefore have to admit that tubercles may be formed upon the pia and cerebral vessels, and remain in what we ordinarily speak of as a latent condition, until some cause comes to start them into activity. The in-

termittent temperature, which is so frequently seen in tubercular disease of the brain, is one which may mislead us, and which I have several times seen lead intelligent physicians into the idea that they were dealing with intermittent fever, and this might readily occur in the beginning of such an attack, where the cerebral symptoms were not yet marked, and more so if the patient resided in a malarious district.

It is well known to aurists and neurologists that purulent disease of the middle ear is a frequent cause of purulent meningitis. If Dr. Sizer will permit me, I will encroach upon his subject in a few words, and sufficient only to make intelligible what I have to say.

Thanks to some of my medical friends, Dr. Mathewson especially, I have made autopsies in five such cases. When you remove the cranium and dura you see that there is purulent inflammation of the pia especially, and sometimes entirely at the base; you examine the dura covering the temporal bone, and you find that it is perfect, no erosion or opening in it; the question immediately arises, how, through what path, has this pia become affected by the inflammation of the middle ear? The answer to this question is what I now present to you as a new observation—I have never seen it alluded to: The position which the Gasserian ganglion occupies under the dura mater, and resting upon the upper part of the petrous portion of temporal bone, or very near it, is familiar to you all. If you tear up the dura you may find that the bone is eroded, or simply presenting to the naked eye a yellowish appearance, and saturated with pus; now you can see that the Gasserian ganglion is surrounded by more or less pus, corpuscles, etc.; now follow the fifth nerve through its foramen of exit from the skull, and you will find that this is the path that the pus has taken to reach and infect the intracranial pia, and this is a very easy way for infection to occur, as the foramen is pretty large; this shows us at once the great danger of purulent inflammation of the middle ear. I have seen the temporal bone when it was firm and hard, and, if it were not for a yellowish appearance, one would not suspect that it was diseased, but the pus appears to filter, as it were, through the bone; generally, if you examine this diseased pia, you will see, to the naked eye, nothing that looks like tubercles; but, nevertheless, I believe that almost, if not all of these cases, are of a turbercular nature; and I am led to make this statement from a microscopic examination in one of these cases, in which there was not the least thing to lead to the idea that there was anything tubercular about the case.

One more point which has interested me, and that is the explanation of the drowsiness, and the immediate cause of death in these cases. Both these symptoms are brought about by anæmia of the brain; at first it is probably an anæmia from want of a sufficient amount of arterial blood,

as well as an anæmia from a slowing of the circulation, and therefore from too much venous blood ; eventually the patient dies from anæmia of the medulla oblongata ; all this is brought about by the changes which take place in the vascular and peri-vascular systems, leading to their narrowing and ultimate occlusion, and which my friend, Dr. Sizer will discuss.

PHTHISIS IN CHILDREN.

BY J. WALKER, M. D.

From the statement made by the President of this Society, at its last regular meeting, it has been his aim to have the subject of Tuberculosis (with especial reference to pulmonary tubercle) so presented by various members of the Society, that the sum of the opinions and experiences expressed, shall have weight in the future, in the determination of the many vital points, which cluster about this very fatal disease. Though not in good taste to apologize or make excuses at the opening of an essay, it does seem to me that the subject assigned to my care, should have been given to a practitioner with at least twenty-five years experience, for the more I have considered the subject, the more I feel as Horace Dobell did when speaking of a proposed article on tabes mesenterica. "Had I selected a less questionable term than tabes mesenterica," he says, "I should have fulfilled my intention of writing the article at the time, but when looking up my cases for the purpose, I found it so difficult to prove in those that recovered that the mesenteric glands were diseased, that I postponed the article."

And so it is with the study of tubercular diseases in children. Dispensary cases are very rarely seen and controlled from the beginning to the end of a prolonged sickness, and unless so seen and controlled, statistics derived from their study are of little value. Few hospitals, asylums or nurseries, afford the opportunity for any more reliable study, so that we are compelled to draw upon private practice for illustrations, but here again, we cannot obtain the statistics which we are often able to do, in the case of adults—for the mother or nurse too often has not noticed symptoms, or does not report them correctly. The child unfortunately may suffer, in addition, from too much or too little mother—diseases quite common in our midst—so that our would-be statistics are often unreliable. Then, tuberculosis is more insidious and chronic with children, than adults, and frequent opportunity is afforded for change of residence, summer trips to the country, consultation and advice of a number of physicians, and consequently the history is not followed up.

An examination of death certificates in health offices, reveals the fact that death in the course of a wasting "disease of childhood" (and there are many wasting diseases), is often assigned to "consumption of the bowels," i. e., marasmus, or to tabes mesenterica.

Therefore, it is, that a gentleman with at least twenty-five years' experience should have been appointed, in my stead, one whose years and experience have enabled him to keep an oversight over many tubercular cases. An opinion from such an one would have the weight the President has desired, but having accepted the position in good faith, it is my duty, under the circumstances, to present the present views of our best children's physicians with such practical points as may occur to myself, drawn from my own experience of ten years among children.

It is not necessary at this time, to ask ourselves whether tubercle is of neoplastic or inflammatory origin. Suffice it for us to know that, whether as the *origin* or *result* of a diseased condition, it kills many children.

2nd. That it exists in children mainly in the form of gray, milliary nodules, or yellowish masses, which are sometimes cheesy, closely resembling, if they are not identical with, similar masses found in the lungs in so-called scrofulous pneumonia.

3rd. Tubercle in the child differs from that in the adult, in that it is usually deposited in more than *one* part of the body at the same time, notably in the lungs and mesenteric glands. It invades the bronchial glands, is rarely found in the larynx, but may be in the intestines, or on the surface of the peritoneum or the cerebral meninges.

4th. Tubercle produces a diathesis and a disease. A child nursed by a consumptive mother and sleeping with her, will be almost necessarily consumptive.

A child with both parents consumptive, need not necessarily die of consumption, if it be placed under the best hygienic conditions. The typical diathetic appearance, viz. : brightness, intelligence, oval face, regular features, complexion clear or freckled, (if we accept the belief of Dr. Gee, of London,) a delicate organization and a highly developed nervous system, though not always indicative of a tubercular tendency, yet should put us on our guard.

This diathesis may remain as a diathesis, only, till some severe disease ensues, then tubercular *disease* asserts itself—alone, or more commonly in children lighting up inflammatory results about it, as a bronchitis, pneumonia, peritonitis, or meningitis.

While not desiring to discuss the relations of scrofula to tuberculosis, at this time, I may suggest that one type of the scrofulous diathesis quite promptly becomes tubercular, under favorable conditions, viz.—fine figure, delicate features, very white general complexion, with

red cheeks, nervous irritability, bright eyes, with blueish sclerotic, thin blood.

5th. The child is surrounded by causes of tuberculosis not so common in the adult. Syphilis, scrofula and the rachitic condition are causes in some instances; Heredity, any interference with the introduction of nutriment, or the escape of waste material in an organization, whose necessities are easy and rapid assimilation, steady and sure growth and development; infection through lymphatics, by purulent and cheesy matter — in some instances quite remote from the apparently infected spot; bad sanitary conditions, defective drainage, residence in incompletely dried houses, in climates where sudden changes are frequent, the living for several hours a day in the air of over-crowded school rooms—one room, for instance, the size of an ordinary back parlor, holding twenty scholars.

Chronically enlarged tonsils, according to Jacobi and others, hinder the lungs from obtaining the large amount of air which is so essential for the welfare of children, and so may be causes of disease.

The latent tendency to tubercular disease, in children even of no marked diathesis, may be developed by measles, pertussis, pneumonia, pleurisy, bronchial and intestinal catarrh.

How are we to know that tubercular *disease* has begun its work?

The detection is by no means so easy as some would have us believe, unless the disease is far advanced.

Wasting is the result of the prevention of assimilation, and may be caused by scarlatina, measles, pneumonia, chronic bronchitis, or by gastric or gastro-enteric affections. Cough may accompany these conditions and their results.

Wasting, cough, debility, anorexia, lowered temperature and chronic diarrhœa, are often the results of prostrating diseases in children—and these are the symptoms so often assigned to phthisis; chronic diarrhœa is often mistaken for tuberculosis—"Tubercular diarrhœa," says Eustace Smith, "is uncommon during the first or second year."

A chronic diarrhœa, if not amenable to treatment, after the most *zealous* care has been bestowed upon the necessary food and its digestion, upon the trial of change of climate and remedial measures, may be pronounced *tubercular, if the mesenteric glands can be felt.*

The discovery of a local bronchitis in the middle or upper part of a lung, associated with dullness on percussion, vocal fremitus, bronchial breathing, with the history of a cough, with or without expectoration, a feeling of tiredness, an increased evening temperature, occasional hectic, diarrhœa especially in the morning, dryness of hands and feet,

would point almost surely to phthisis pulmonalis ; but diffused tuberculosis of the lungs, or a localized quantity masked by a pleurisy, or a pneumonia, or an emphysema, or in a child with loud, strong respiratory murmur is not so easily diagnosed. Neither is it an easy matter to distinguish catarrhal phthisis from fibrous phthisis, (which, though not common, has been found in children over 5 years of age).

The difficulty in distinguishing slight deposits demand the consultant's advice more than the once which is usually expected in the case of adults.

Hasty judgments are more censurable in regard to children than adults ; for, while the vital forces may be quickly weakened, the recuperative power of a child is sometimes wonderful, so that treatment very often effects a cure in children when it could not in adults.

TREATMENT.—The removal of a child from the city to the country, where warm fresh milk, abundance of ripe fruits and vegetables can be had, with outdoor life and exercise, will often, I believe, break up the vicious circle of disease, which has begun with a tubercularization, if the child is not returned to the city too soon. As with the adult, it may be best to advise a prolonged stay.

The sea-shore presents a favorable retreat, providing that the child can practically live out of doors; but not in an extreme heat. Here, too, fresh milk and other good food are necessary.

The outdoor air strengthens lungs and digestive apparatus. If the disease has gone on to formation of cavities I do not believe sea air is useful. For such cases a well-ordered home, wherever it may be, is best. The fatigue of long journeys and the excitement consequent upon them, is injurious.

Much can be done to strengthen weak lungs and expand the capacity of the chest by Goodyear's pocket gymnasium and similar contrivances; and by proper respirometers.

Clothing should be warm, but at the same time *light*—a matter which is too often lost sight of.

Bathing is often overdone. Where it can be used, cool or cold water is best. With very weak children, daily inunction of oil is better.

Salt-water bathing is extremely serviceable, if carefully made use of.

The medicinal anchor, cod liver oil, cannot be safely dropped; but it might well be in many instances, where it is taken with disgust, digested with difficulty, and does little good. I am satisfied that a 1 dr. dose is too large to begin with in the average child. Rather try $\frac{1}{2}$ or $\frac{3}{4}$ dr., or less, until we arrive at a toleration point, then the dose can be increased. Combined with the syr. calcis lactophosphate, as advised by J. Lewis Smith, it is palatable; or it might be combined with a saccharated solution of lime. A good pancreatic emulsion is valuable.

The syr. ferri iodide, useful as it is, must be given with caution. A destruction of the appetite is a step downwards.

Inhalations with young children are of little value, for they are apt to frighten. Stimulating liniments of strong camphorated oil, turpentine and sweet oil, etc., etc., are better for the relief of pain. Poultices are unwieldy, annoying and are often allowed to remain on the body when they are cold. Spongio-piline, or bags of hot water, are better. Chest protectors had better be of flannel, in the form of undershirts.

In short, the child's strength is to be maintained by every hygienic and medicinal agent, that will equalize the temperature, allay irritation, assist assimilation, and prevent waste. The details of treatment must of course differ in individual cases, and cannot be elaborated here. I have merely touched upon, in this brief paper, such points as seemed to me most necessary to bear in mind, for the paper is to be sandwiched between those of heavier calibre and weightier material.

THE RELATIONS OF DISEASES OF THE SEXUAL ORGANS TO PHTHISIS IN WOMEN.

BY A. J. C. SKENE, M.D.

Dr. Armor has clearly defined the character and importance of the derangement of nutrition which generally precedes phthisis pulmonalis. He has thoroughly formulated the facts and presented them in a manner so complete as to leave no room for discussion on that branch of the subject.

The derangement of the nutritive system which precedes tuberculosis may be due to some congenital imperfection of the organization which renders it unfit for prolonged existence under the usual conditions of life; on the other hand it may be the result of some acquired local disease, arising from natural causes acting upon an individual of good previous health. My own observations have been directed to the latter class of cases, and on that account I presume to offer some remarks upon the action of diseases of the sexual organs of women in causing, directly or indirectly, pulmonary consumption.

Several writers, among whom Dr. T. E. Emmet may be mentioned, have made the statement that diseases of the sexual organs of long standing tend to develop phthisis, but I am not aware that any one has fully defined the etiological relations of the one to the other; nor has any systematic description been given of the various ways in which deranged

function or organic disease of the reproductive system tend to the development of disease of the organs of respiration.

Time will not permit me to enter fully into this question just now; but a few facts may be stated by way of introduction to a more complete discussion, which I trust will follow.

It is a well known fact that diseases of the sexual organs affect the nervous system, especially the organic. The host of morbid nervous phenomena, the capricious appetite, labored primary digestion, coated tongue and constipation so often observed in those who suffer from uterine or ovarian disease, need only to be named to recall the well-known connection between the primary affection and the consequent disturbance of the nervous system which impairs nutrition. This derangement of nutrition is caused in various ways. First, by reflex action, which primarily affects the stomach, giving rise to nausea, loss of appetite, and discomfort during digestion. This sympathetic derangement of the digestive organs resembles that which occurs in the early months of utero-gestation, with this difference, that in the one it is well marked, but intermittent and limited in duration, while in those who have uterine or ovarian disease, it is mild in form but continuous. This form of reflex dyspepsia is caused by a variety of affections, such as corporeal endometeritis, intra-uterine neoplasms of rapid growth, and ovarian diseases, especially those of an inflammatory character. Acute displacements of the uterus and ovaries should also be mentioned in this connection. The prompt development of derangement of the digestive organs upon the disappearance of such diseases of the sexual organs leaves no doubt that the one causes the other. This reflex disturbance of digestion, and the consequent mal-nutrition, is characterized by its early appearance after the onset of the primary disease.

The same form of mal-nutrition, of a mild type, is produced in another way by similar causes. A very good illustration of the class of affections that we now refer to, is called ovarian dyspepsia by Fothergill, in an article on that subject, given in the American Journal of Obstetrics.

This form of deranged digestion and assimilation appears later in the progress of the local disease, and is apparently the result of nervous exhaustion rather than deranged reflex action. The conditions of the sexual organs which influence the general health in this way are numerous. Long continued leucorrhœa, menorrhagia, prolapsus, and congestion of the ovaries, and pelvic neuralgia from old adhesions, are among the most common in the long list. The chief symptoms which follow from this state of affairs are want of appetite, constipation, mental depression, sleeplessness and general weakness. These symptoms increase in severity, and others are added to the list, as the rest of the organiza-

tion becomes undermined by the depressing influences of the original local disease. The final termination of such cases will depend upon circumstances. Proper treatment may restore the health, by slow degrees in some, while others, who are uncared for, will pass on to phthisis and death; others to insanity and general paralysis, according to their several predispositions.

There is still another part of this subject to be considered—viz., acute inflammation of the pelvic organs or tissues, such as pelvic peritonitis and cellulitis. While many patients who suffer from these affections recover promptly, there are others who, from long-continued suppuration, or numerous relapses, become so reduced in general health that phthisis supervenes. Pyæmia, which occasionally occurs in these cases, may develop hepatic and pulmonary diseases, which end fatally. This fatal issue follows at times, even when the primary disease disappears. We have all seen patients of this class who have been guided to recovery from a tedious pelvic peritonitis, but were left with the seeds of a fatal lung disease, which would never have been planted if the pelvic disease had been escaped.

There are other points to be considered in this connection besides the mere effect of disease of one group of organs upon another. The confinement indoors, and restricted exercise which are imposed upon those who suffer from infirmities of the sexual organs has, no doubt, a tendency to undermine the general health. The poor class of women, who are obliged to work for a living under conditions which are so ill suited to life, suffer far more than those who have all life's comforts at command. The wealthy (who can have generous diet, rest in airy rooms, and the care of physicians who give drugs and sympathy, which sustain hope, though they do not cure the disease,) can endure their infirmities and largely avoid the tendency to pulmonary disease.

We come now to those who have imperfectly developed sexual organs, and, in consequence, suffer from functional derangements of the reproductive system.

In such women menstrual derangements begin at puberty, and continue through life, unless they are relieved by treatment, or disappear upon change in social relations. Among a large number of those who suffer from painful, irregular, scanty or suppressed menstruation, not a few will be found who develop phthisis.

In some of those who become consumptive under these circumstances there is no doubt a natural tendency to that form of disease, and the imperfect functional action of the sexual organs only hastens the fatal issue. It also appears reasonable to suppose that any anatomical and functional imperfection of the sexual system would lead to the same results in those

who have no marked predisposition to phthisis. Clinical observations appear to confirm this view. The explanation of these pathological relations of the respiratory and reproductive systems may not be altogether satisfactory with our present knowledge, still there are data sufficient to warrant us in giving due weight to this view of the subject. When there is dysmenorrhœa sufficient to cause great suffering, and consequent derangement of the digestive systems, sufficient to impair the general health, we can easily see how phthisis might supervene. This, however, would not explain why it is that those who menstruate irregularly, or who have amenorrhœa, should also show a disposition to the same degeneration of the lungs. We have many facts which indicate that such baneful influences are exerted upon the general health by amenorrhœa. All have observed that amenorrhœa, due to imperfect development of the sexual organs, is often followed by anæmia and ill health.

Such being the facts, we may theorize regarding this train of morbid action. Nutritive material has been provided for the sustenance of the sexual organs, and if that supplemental supply is uncalled for, because of the inaction of the reproductive system, confusion of function follows, and a consequent lowering of the general functional forces of the whole organization. Vital force, which has been habitually directed to the organs of reproduction, but is defective, because the function of menstruation has been suspended, must derange the nervous system. It is upon some such ground as this that we can account for the anæmia, hepatic and gastric derangement, and abnormal nerve phenomena which so frequently appear in those whose menses are arrested from causes other than pregnancy.

Finally, diseases of the sexual organs are very often chronic in character, having little tendency either to recovery or to end fatally by their own unaided effects. The consequence is, that if relief is not given by treatment, such patients go on in suffering until relieved by the menopause, or until they lapse into some more fatal affection, such as phthisis.

The one fact appears to be plain—that the influence of diseases of the sexual organs upon the general system is peculiar, and differs from acute affections of the other organs, which tend to recovery before having permanently damaged the rest of the organization. They differ, also, from degenerative diseases, which are fatal in themselves without being aided by other affections that they may induce.

From this we may infer that, of all diseases that are not naturally fatal, those of the sexual organs exert the greatest influence for evil upon the general system. This gives an importance to this class of affections that does not appear when attention is first directed to the subject. We are all (both physicians and patients) liable to overlook diseases of the sex-

ual organs until the development of other symptoms, such as those of the pretubercular condition, before medical counsel is asked or given. This is unfortunate, because, when the treatment of such cases is undertaken, our success is less prompt, owing to the two morbid processes complicating each other.

PHTHISIS IN ITS THROAT COMPLICATIONS.

BY S. SHERWELL, M.D.

Discussion of the various points raised by Dr. Armor in his valuable paper on precursory stages of Phthisis, under the heading of "Fauces and Larynx, and their Complications in Phthisis," would, if at all extended, take up too much of the Society's time. The amount of literature on the subject is very large, and as is usual in such cases, somewhat conflicting; so I shall confine myself as nearly as is possible to comments on those paragraphs bearing on the subject, in due order, and as briefly as may be. It has seemed impossible to me to avoid mentioning some of the later complications of laryngeal disease in these states. I have endeavored to be concise; my beliefs on this subject are my own, and I have been gratified on consulting the opinion of those who may be termed the Fathers in Laryngology, to find that the result of their larger experience confirms my own. As will be seen, the tendency is not to magnify my office.

To take up paragraph 1:

"*Fauces and Larynx.*—A very common form of consumption, according to the observations of Peacock, is that in which the first symptoms are those of a catarrhal sore throat and hoarseness. He inclines to the opinion, contrary to the teachings of M. Louis, that the laryngeal affection, in a considerable number of cases, precedes the development of pulmonary disease. And Lennox Brown, of London, who has had unusually favorable opportunities for studying diseases of the throat, favors the same view. Such was also the view held by Horace Green, Lawson, and others of our own country. There is certainly no form of consumption which so surely and steadily advances as the constitutional or tubercular variety, which commences in the laryngeal symptoms."

I cannot recognize the form of consumption commencing in the throat as at all a common one. I do not think that the laryngeal affection, in any very considerable number of cases, precedes the development of the pulmonary disease—if, indeed, the *local anæmia* which is ordinarily *general* is not accepted as proof. In fact, it has frequently astonished me to see how often in the several forms of tertiary stages of phthisis I have been able to find nothing but an anæmia of the larynx

and adjacent structures, or, at most, a mild sub-acute catarrh, as easily palliated by appropriate medication as any other.

I entirely agree with what the doctor says in the concluding sentences of this paragraph. There is no form of the disease which advances so surely and steadily as that in which laryngeal symptoms commence it, or, at least, appear early on.

Second paragraph:

"With the catarrhal form of the disease there can be no doubt of this relation; no fact is better established in the clinical history of the disease. A large proportion of cases of catarrhal phthisis begin with a naso-pharyngeal catarrh. This catarrhal condition extends to the bronchioles, developing in one case lobular pneumia, with all that that implies in its relations to phthisis, and in another to peri-bronchitis, which usually accompanies the fibrous forms of the disease."

It is more difficult here to be exactly positive as to the causal relations of a catarrh (laryngeal, however) to pulmonary consumption; but I am a total disbeliever in the power of a naso-pharyngeal catarrh to produce any disturbance of pulmonary nutrition, if I may except its general demoralizing effects, which may lower stamina, and so interfere with general nutrition, and thus lead to anything: general anæmia, depression of spirits—suicide, even.

I am kept all the time protesting against this idea, which is so believed in by the laity, and which is so fostered by irregular practitioners (the dropping-down-of-secretion theory,) which it is difficult to think can drop anywhere except into the œsophagus. In short, I must reaffirm my personal belief that a naso-pharyngeal catarrh never once led to pulmonary consumption, unless indirectly, as stated. It is a sufficiently grave and disagreeable trouble, to be treated on its own merits. Frequently it affords me pleasure to assuage the fears of anxious patients, who, from perusal of advertisements, etc., had come to the conclusion that their hours were numbered, though they might have been suffering from same trouble two, five, ten, even twenty years, and in whom not the slightest lesion of lung could be found. We all know what a heavy tribute pulmonary consumption levies on the human race. It may be easily conceived how much more fearful would be its ravages if this trouble stood in any direct causal relation. It may be throwing figures around rather loosely, but it seems to me sometimes as if fifty per cent. of the civilized world, and a fair percentage of the savage, had *Naso-Pharyngeal Catarrh* in some degree.

Third paragraph:

"These views are, of course, vastly important in their practical bearings; for if we recognize the order of morbid action here indicated, our attention is early directed to the condition of the *pharyngo-laryngeal mucous membrane*. May we not accomplish much toward preventing the extension of the disease into the

pulmonary structure by sedative and astringent application made directly to the part thus primarily affected? for tubercular patients, says Niemeyer, are apt to become consumptive. The danger is not from tubercle, but from the destructive inflammatory and ulcerative effects of tubercle on the parenchyma of lung substance."

If the doctor had confined his remarks in this, the concluding paragraph, to "laryngeal" mucous membrane, I should be ready to agree with all premises and deductions here. Personally, I think that while phthisical changes (tubercular, catarrhal, etc.,) are most generally found in the lungs, it is possible for them to be primary anywhere. As McKenzie says, "Without our being bounden to adopt any exact pathological process, a low chronic, inflammatory process is at the bottom of it all." The larynx is shielded from and not inimical to this process, but it sometimes, perhaps, falls a primary victim. I think it very uncommon. After, however, the lungs have been attacked, and other tissues have followed, the larynx may be invaded, and from the constant mobility of its parts, cause the greatest suffering—more pain, indeed, than from all symptoms referable elsewhere.

The remarks of the doctor under head of "Cough" are very just, and will be noticed further on.

Diagnosis.—Remarks on diagnosis, etc., by Laryngoscopic means, would seem to come next in order. I do not think, in the precursory stage, anything of a *distinctly* pathognomonic character is to be observed; certain symptoms as, anæmia of the parts, slight œdema of the tissues over and about arytenoids, a creamy catarrhal secretion may be observed, a slight hoarseness, intermittent, and sometimes persistent aphonia, etc.; these all, or any of them, may occur in other diseased states of the larynx, and are often easily relieved and cured; when, however, there is any chain of them together occurring, physical examination, if not already made, should be, of the other respiratory organs.

When the disease has gone on as far as the ulcerative stage in laryngeal phthisis, the distinctive characters, and sites of this destruction have more of a pathognomonic nature; but I doubt if *any one* could be absolutely certain, if there were nothing else to guide, as, for instance, the patient's condition and symptoms in other respects. Various gentlemen affirm that they can so recognize with certainty Phthisis laryngis, at this, and earlier periods; for instance, Dr. Lennox Brown, of London (McKenzie's assistant), and Dr. Frank Bosworth, of New York, who has written an excellent paper on the subject, and with whom, in many other respects I agree. But, "per contra," as against those, and some other authorities, I must put in evidence.

Von Ziemssen, who says:

"Every Clinician must surely recognize it as the rule, that laryngeal ulceration is preceded by destructive pulmonary affection, and, accord-

ing to my experience, I should designate it as a rule that has but few exceptions."

Again :

"Neither the catarrh nor the ulceration of phthisical subjects present any characteristic signs by which it could be recognized as such. The attempt to establish pathognomonic peculiarities cannot be said to have succeeded."

McKenzie, Von Bruns, Marcet, Solis Cohen, follow in language and conclusions almost identical, I must say that my experience leads me to same. While I acknowledge the great frequency of the pyriform tumefaction over arytenoids, and bulging of the folds of mucus membrane of the posterior commissure so much relied on as diagnostic evidence by Drs. Browne and Bosworth, etc. These signs may be produced by affections, or ulcerations, having their origin in quite other diathetic conditions as, syphilis, or epithelioma (this point, I think, carefully begged by both the Drs. B.), as on deducting those two causes, and considering, certainly the relative infrequency of the one (epithelioma) any one, from the general appearance and symptoms of the patient, should be able to make a good guess.

I think I could often demonstrate some of the so-called diagnostic points of phthisical laryngitis (as pyriform swellings of arytenoids, œdema, etc.), on stump orators at the end of a campaign, the lower order of "café chantant" singers, male and female ; where an acute inflammatory process occurs on a ground already, and for years, in a state of sub-acute chronic inflammation. The throat, if considered alone according to these indications, might say tubercle, but a look at patient's face would dispel that idea. Such cases are by no means rare.

In some thousands of throat cases seen by myself, among which laryngeal complications of phthisis have filled an important part, I can now recollect but four, less than the fingers of one hand would number, in which degeneration of lung tissue did not clearly precede, or, at least, apparently advance, "pari passu," with the throat diseases; in all of these, it, *phthisis pulmonum*, became very severely manifest before death. Still, I can believe that in some cases the disease of the larynx may be primary, must also think that they are very unusual.

I might, perhaps, be permitted in these clinical remarks to touch upon pathology so far as to give a theory of my own which may serve to explain the apparent primary irritation and ulceration in those four and in other cases. It is in this way I would conceive it to occur : tubercular infiltration may already permeate most of the tissues and glands, more deposit and inflammation of low type be present in them than in the larynx. In those situations they are comparatively quiescent, but in

no other situation are the tissues so squeezed together and exercised as in this very organ during phonetic and even respiratory acts, thus leading to their, or its, *breaking down early;* this in some degree tends to explain its relative infrequency in that region, as, if the conditions are present in any great degree, destructive metamorphosis must follow *more rapidly* than in other less mobile structures. I simply give this as my own explanation of what I think a clinical fact.

According to Williglk, in careful autopsy of 1,317 phthisical bodies, male and female, 13 per cent. showed laryngeal complications (I presume ulcerations or presence of tubercle here is meant, it would be difficult, I imagine, to demonstrate others on cadaver); intestinal lesions, however, due to same disease, in 49.6 per cent, of same bodies.

Ziemssen says: "For about 15 years I have given special attention to this subject, having a large amount of material for observation at my command, and thus far I have *not found a case* of phthisical ulceration of larynx in which I could not demonstrate either fresh or old consolidation in the lungs especially at their apices.

Treatment.—A few words as to therapy, or better, alleviation of symptoms in phthisical laryngitis. The ulcerations, when they are beyond mere abrasions of mucous membrane, are recalcitrant to healing efforts, partaking, as they do, of the nature of indolent, painful ulcers, flat-bottomed, and with scraps of undermined tissue, waving often like flags of distress in the to and fro current of air, distinctly recognizable by direct illumination. In rare cases even these may be made to heal, in all cases palliation of the symptoms of the most decided sort may be obtained by topical applications to the parts indicated.

The regions of larynx most inimical to ulceration, as all writers agree, and as all having to do with the subject must have noticed, are first in order of frequency, the fold at back of larynx covering arytenoideus muscle, and where the two arytenoids meet when phonation is attempted, the tops of arytenoids themselves, then the vocal processes of arytenoids (where the vocal cords are attacked posteriorly,) then the lower part of the mucous coat of epiglottis on its inner aspect, and sometimes, but less frequently, the free edge of epiglottis.

Fortunately, all these parts, with the exception perhaps of the lower portion of epiglottis, are easy to examine, and, with aid of laryngoscope, easily treated by means of any application selected, *even by spraying*, if tongue be pulled forcibly forward, so as to bring the epiglottis well back.

Of course opium and its alkaloids play the major role in relief of pain here, by insufflation, application in liquid form by brush, spray, etc., but often as in indolent painful ulcers in other regions, the destructive

process can be brought to its senses, so to speak, by an alterative, or a sharp caustic application, better than in any other way ; in such cases an application of the mild chloride, or brushing with stimulant application of argent nit., or other moderated escharotic, will have a greater soothing effect after a few minutes, or a half hour, than the application of a more rational anodyne ; by this the ulcer loses its painful character, and can be thereafter soothed and blandished, and even sometimes, but rarely, healed.

I will not take up time here by giving any list of topical applications that may be of use, the books and monographs on this and kindred subjects are full of them, but I have not as yet seen in any reference to the subject this advice as to alteration which in personal practice I have found very efficacious, (this whipping up, so to speak, and encouragement of the indolent tissues to repair instead of increasing the already present asphyxia of the tissues by a narcotic anodyne.

Dr. F. Bosworth, in his paper (*Med. Record*, Nos. 445, 446), gives various formulæ, more or less good, for medication of the larynx in the earlier and later stages of phthisis ; he prefers medicated sprays, and gives his reasons therefor; but I feel obliged to differ with him in some respects. I believe a brush, for instance, of this sort (showing one) must be very roughly or carelessly handled to produce any pain or injury; while with it, one used to the operation can place whatever application is needed so much more efficiently on the diseased parts, that it surprises me to read his eloquent vindication of his therapy. He also eulogizes a powder insufflator contrived by Dr. H. A. Smith, by which the powder thus thrown into laryngeal cavity is equally distributed everywhere. I think this very claim is its condemnation, as certainly the powder is best applied, and most efficacious, when applied as nearly "en masse" as may be, to the part affected. I have here an insufflator made for me by Haslam (showing it) which, to my mind, answers all the indications. It is curved to take the working hand out of the line of sight and illumination, and so that a slight twist of long axis depresses the point of tube in necessary direction, and while in this the insufflation is done by mouth instead of compressed air, it is more simple and manageable, and it may be easily seen that no air, except that residual in the tube itself, is insufflated at the same moment as the powder, so that, except in theory, it is as fastidious as other means.

I cannot advocate, as a rule, *the glyceroles*, unless modified. Glycerine, undiluted, is an irritant to the mucous membrane in itself, and containing other remedies in solution or suspension, can be hardly less so, A water menstruum, with slight amount of glycerine, is perhaps the best.

But further consideration of medicaments and so forth, I feel would be out of place here, and will make an end by simply adding that,

thanks to the laryngoscope and aids, there is no disease of an internal organ which can be so promptly and successfully alleviated as the laryngeal diseases complicating phthisis pulmonum.

PATHOLOGY OF PULMONARY PHTHISIS.

BY N. B. SIZER, M.D.

Since the earliest times the apprehensions of mankind have been justly excited at the fatality of Phthisis; to-day, in all the light of the nineteenth century, *two-sevenths* of all that die go to a consumptive's grave.

If we examine a lung taken from a case of tubercular phthisis, we may observe at the apex a solid mass, visible and easily felt from the pleural surface.

On making a section, three classes of lesions are visible to the naked eye:

1st, Small nodules, the size of a pin's head, or larger, gray, translucent, firm to the finger; these are *miliary tubercles*.

2d, Larger, grayish-white masses, some yellow and soft in the centre; these are caseous masses, the "*tuberculum crudum*" of old authors.

3d, Cavities of varying sizes, containing a putty-like, purulent material, perhaps very putrid in odor. These cavities are by far the most obvious lesion, and were very early observed.

Hippocrates, *Galen* and *Rhazes* considered phthisis as a purely inflammatory disease, which destroyed the lungs by suppuration and gangrene.

Sylvius appears to be the first to notice anything more than the usual signs of inflammation, and found, also, certain large and small nodes, which he believed were turned into cavities by softening and breaking down. These nodes he was the first to call "tubercula," and considered them to be inflamed glands.

Bonnet (1679) described lungs with cavities and with "innumerable small tubercles," evidently a case of disseminated tuberculosis.

Mangetus, in 1700, first made the classical comparison of the tubercle to a millet-seed, and used the word "miliary."

Morton, in 1780, described many forms of phthisis, but claimed tubercle as the initiatory stage in each.

Matthew Baillie (1793) says that tubercle is constantly present in phthisis, and explains caverns as the result of softening in a tuberculous mass. He confounded the granular tubercle with the large, cheesy masses, and was, I believe, first to use the term "caseous matter."

Portal (1809) adds to the confusion by saying that certain putty-like material was "usually called tuberculous."

Bayle (1810) describes 900 cases of phthisis as divided into tubercular, granular, melanotic, ulcerating, calcareous, and cancerous phthisis. He denied that tuberculosis was ever dependent on inflammatory states of the lung.

Laennec, in 1837, laid down certain dicta which even yet have strong hold on many practitioners, but which modern study has undoubtedly overthrown as being *untrue* in theory, and *dangerous* in practice.

His error is in insisting that all caseous masses were of tubercular origin, having originally all been gray miliary granulations, and in denying that tubercle was of inflammatory origin, or could follow an old pneumonia or pleurisy; or that it was caused by a bad cold, or even an intense bronchial catarrh. When confronted by the fact that phthisis is not infrequently a sequel to an ill-cured pneumonia, he dexterously evaded the dilemma by the unfounded assumption that *in such cases the tubercle was previously present.*

Andral (1840) and *Louis* (1843) supported Laennec in many of these dogmas, and in 1844 *Lebert* created a profound sensation all over Europe by announcing the discovery of a specific tubercle cell. His peculiar "hobby" had always been to endeavor to find a specific cell for each disease, and he had already discovered his so-called "cancer cell," although, unlike *Lostorfer*, he did not succeed in syphilis. He found, in certain caseous masses, small, irregular, angular bodies, varying from 0.006 to 0.012 mm. in size; some with a nucleus, others only faintly granular.

Agreeing with Laennec in considering all caseation as tubercular, he was sure he had found the type-cell of tuberculosis, and proved Laennec's theory.

The world moves, however, and stone by stone the carefully-built edifice of the fathers must be dismantled.

Virchow commenced the attack in 1847, by showing that caseous changes may occur in any tissue when nutrition begins to fail. Under these circumstances the tissue cells become fatty, gradually desiccate and finally fall in pieces into the albumino-fatty mass, which is likened to decomposed cheese, and, therefore, called "caseous."

Reinhardt began, at about the same date, to suspect that *Lebert* had observed a dead cell of some kind, and had described it as a tubercle corpuscle; and by 1850 had discovered that *any* inflammatory product whatever is apt to break down in time into a caseous mass, and that the dead fragmentary cells of such a mass, whatever be its origin, are identical with Lebert's "*tubercle corpuscle.*"

Virchow then proposed to confine the term "tubercle" to the miliary granule only, as cheesy masses in the lung might be relics of old pneumonias, or other inflammatory processes.

Buhl, in 1858, and later, was first in throwing light on the origin of miliary lesions, showing that, in the majority of cases, they arose from infection, just as we have miliary abscesses from a like cause in *pyæmia;* that the source of tubercle infection is to be sought for in some broken-down caseous mass, somewhere in the body, whatever might be its origin ; that particles being taken up by the blood or lymph streams irritation arises at any point where they may lodge—irritation too light for local death and suppuration, but enough to set up emigration with new cell growth.

Buhl erred, however, in assuming that caseation is always a prerequisite. We now know that *any* inflammatory product may be sufficient, caseous or non-caseous.

In 1865 a great sensation was created by *Villemin,* who had attempted to prove that tubercle could be inoculated like syphilis.

Having inserted fragments of caseous masses in the peritoneum and elsewhere in certain animals, he found impaired health ensue, followed ultimately by generalized miliary tuberculosis.

Laennec's adherents were jubilant ! They had proved that tuberculosis was an inoculable disease, and as Villemin had used caseous matter, that *too* was proved to be tuberculous.

Burdon Sanderson, Wilson Fox, Cohnheim, Klebs and others have repeated the experiment, and have shown that *any* inflammatory product is often sufficient to infect animals, even a seton in the skin, among rabbits and guinea-pigs, is found all sufficient.

These results have, of course demolished the Laennec hypothesis, and show that any irritating substance may produce infection tubercle.

It has been found that either the blood or lymph streams may carry the infection, or both, and that in animals the meninges are not as often affected as in man, and that in the lungs, perivasculitis is apt to *precede* the involvement of the air-cells, while in man the *reverse* is true.

We find certain animals much more prone to tuberculosis than others, even after very slight lesions.

The cases of tropical animals in our menageries are more analogous to those in men since we find them first suffering from a *catarrhal bronchitis*, then *caseation* of its products occurs, with ultimate death by *chronic pulmonary tuberculosis.*

Rindfleisch considers that we find in the strumous diathesis in *man* the same susceptibility to tubercle that rabbits and guinea pigs exhibit among *animals.*

We know that in strumous persons, all inflammatory processes are apt to pass away very slowly, and often to remain stationary for a long time, exudations tending to become caseous especially in the glands.

In examining a fresh strumous exudation we notice large shining cells with often a segmentation of the nucleus, which are supposed to be emigrants that have unduly imbibed the plasma of the tissues and have lost their proper amœboid motion. These cells tend to become fatty and to establish a caseous focus, by accumulation. Analogous facts are observed in a strumous catarrh; here the mucosa is stuffed with emigrants that ultimately take on the same changes, break down and fill the catarrhal secretion with their granular débris. Part of this débris of course is taken up by the blood and lymph streams, thence, as we now think, is the source of infection in a strumous person; any inflammatory process necessarily furnishing much of this irritative detritus.

FORMS OF THE DISEASE, ACUTE AND CHRONIC.

Allow me to mention, in the beginning, *acute miliary tuberculosis*, which is often described as a variety of phthisis (but improperly, it seems to me,) rather to complete the pathological picture than as a disease of the lungs.

Acute tuberculosis, then, is an infectious disease, usually fatal in a very few weeks, or even days, the more rapid cases being those in which the meninges are invaded, and in regard to the question of diagnosis I will merely say that it has often been confounded with typhoid fever.

The autopsy almost invariably reveals a caseous scource of infection.

The cadaver is that of a victim of an acute febrile disease, the blood is liquid and dark, muscles red, spleen usually soft.

The lungs are uniformly studded with miliary granoles, all gray and translucent as a rule, the peritoneum, spleen, liver and kidneys being usually also filled with the neoplasms.

In the young we are apt to find them abundantly in the *pia-mater* at the *pons varolii* and around the *optic chiasm*, often complicated by acute hydrocephalus of the ventricles.

The histology of a miliary granule is the same wherever found.

We have, as a foundation, a mesh-work, (adenoid tissue, reticulum,) inclosing one or more *giant cells* (myeloplaxes), each containing twenty to thirty nuclei, together with a number of flat, large cells, (epitheloid) like epithelium, all surrounded by many small round masses, (lymph corpuscles, emigrated, leucocytes). The histology of the gray tubercle is very interesting, but as I have already treated it at far greater length than my present paper will allow,) permit me to refer you to my article on "*The Genesis of Tubercle*" which is accessible to all of us in our "Proceedings," (1876, Oct. and Nov. meetings, Vol. I. pp. 259–268.)

ACUTE CATARRHAL PHTHISIS (PHTHISIS FLORIDA) SOMETIMES CALLED "GALLOPING CONSUMPTION."

This may be defined as a rapidly fatal *catarrhal pneumonia*, in which large tracts become speedily caseous, and as quickly break down, leaving large ragged caverns of surprising extent.

Those "periods of arrest" so well known in the chronic forms, when the destructive process seemingly halts for months or even years, these, I repeat, are never met with in *acute phthisis*. It has been said that phthisis florida proves fatal in most cases in thirty days. This is no doubt too short as an average, but it is usually too quickly fatal to allow time for the growth of tubercle.

The fever is of a high grade and the marasmus correspondingly rapid.

CHRONIC TUBERCULAR PHTHISIS.

We may define tuberculosis to be an inflammatory disease, due to struma, and arising (in man) from self-infection by the products of strumous inflammation. Compound lesions are therefore found; some due to strumous inflammation only, others due to tubercular neoplasms alone; the line of demarcation is not always very clearly defined.

EARLY STAGES.

A patient, having had a bronchial catarrh, apparently gets well, but a cough annoys him sometimes and finally alarms him. Auscultation merely shows a catarrh of the apex. If we could examine the lung we should find a circumscribed catarrh of the small bronchioles, with an eruption of tubercle in the acini belonging to those bronchioles; these are dry, white, firm nodules, of three or more lobes, the whole perhaps 1.5 mm. in size and attached to a minute bronchiole like a "berry to its stem."

"Lobes" and "lobules" of the lung are tolerably well known, but let me recapitulate.

A lobule is a pyramidal mass, its apex attached to a small bronchus, its base pointing to the periphery of the lung, and each lobule is made up of two to twenty *acini*. (See Schultz, "Stricker's Handbuch")

Each acinus is a conical body, 3 mm. long and wide, situate at the tip of an *ultimate terminal bronchiole*, which is not more than 0.3 mm. wide where it opens into its acinus. If we imagine ourselves walking into an acinus by the bronchioles, we meet at once several sharp concave edges, which are ends of partitions that divide the acinus into infundibula, the latter into alveoli.

These sharp edges are of great interest, as they are the spots first inoculated by the strumous mucus of the bronchis, and develop into white nodules, the *miliary pulmonary tubercle*.

This tubercular growth has been mistaken by many for a stuffing of the acini with epithalium, a mistake that has led some to describe these cases as "*catarrhal pneumonia.*"

The catarrh is regarded as primary, conveying the infection by the mucus to the angles and projections in the narrow *acini*, just as it does in the narrowest parts of the larynx, wherein we know the vocal cords are almost a seat of election for the eruption of tubercles. If it be asked why the apices are the usual seat of tubercle, the same reasoning will apply, for it is easy to show that the apex is the least movable part of the lung. Hence the strumous secretions are least easily removed by expectoration from the apicial bronchioles, and remain packed into the narrowest parts of the canal, there to infect the system (Ziemssen Cyclop., vol. v.) *Hæmoptysis* is a frequent symptom in the early stage, and is easily explained when we remember that *tubercular perivasculitis* is a very common form of the lesion, and Rokitansky has shown that it induces a degeneration of the middle and inner coats of the pulmonary arterioles, thus weakening them precisely as *atheroma* does; a sudden increase of blood pressure from coughing or any exertion will easily rupture the softened wall.

As the case goes on the granules multiply and form masses 6 to 10 mm. in diameter, usually surrounding a bronchus. These soon become caseous.

If we slit up a bronchus with scissors, when we reach its peripheral branches of 3 to 4 mm. we begin to notice small spots in the mucosa, easily seen on a red background. As we pass on to smaller and smaller bronchioles, the spots multiply until we find almost all the mucosa covered by them, and transformed into a thick nodular yellow layer, closing the lumen of the tubercle.

These appearances are due to a diffuse infiltration of leucocytes around masses of miliary and sub-miliary tubercles, and presenting the histological elements peculiar to the lesion. After a certain time the mass breaks down, and forms a non-suppurating ulcer, tending to enlarge in every direction, infecting its own neighborhood.

The *peribronchial lymphatics* early become involved, and we find the peribronchial tissue stuffed with leucocytes and adenoid tissue, the bronchus being turned into a hard cord by the dense new growth outside, which is partly miliary, partly diffuse.

The alveoli also share in these processes, being filled with epithelium which has degenerated from their walls (desquamative pneumonia.)

The lung epithelium originates in the "*intestinal gland layer*" in the embryo, and is similar then to other glanular epithelium, but in the adult the cells flatten, becoming more of the *squamous* variety.

Buhl tells us that these cells are much more like *endothelia* on the serous surfaces, especially like those of the ornentum or of the perithelium of the cerebral vessels. In this process of desquamation the cells loosen, swell up, fall off from the alveolar wall and segment their nuclei, and finally distend the air cells. Friedlaender has shown us that "*desquamative pneumonia*" is apt to occur in all inflammatory states of the lungs.

The *inter-alveolar septa* at the same time are thickened by a large cell infiltration, polynucleated and round, so abundant indeed that the vessels and elastic fibres are hidden from sight. The crowded cells keep out the nutrition blood from the arterioles, and shrinkage and caseous changes follow speedily, resulting in the so-called "*fibrous phthisis.*"

In very chronic cases this "interstitial pneumonia," as it is called, tends to invade lobules hitherto healthy. The peribronchitis, however, tends to involve the whole of its own lobule first, but the desquamative process will attack a lobule where the bronchi are still healthy.

In more acute cases the nodules in the mucosa sometimes rapidly occlude a bronchus by their growth, resulting in a case of *acquired atelectasis.* These are similar to those cases in rabbits when death follows section of both pneumogastric nerves in the neck. Under such circumstances the glottis is paralysed, food passes into the trachea and plugs up some bronchioles. We found wedge-shaped masses of lung, red, devoid of air, usually along the edges of the lower lobes. These are the lobules belonging to the plugged bronchioles.

When the tidal air is shut out the lung contracts by its own elasticity, the contained air disappears, and the air cells are filled with serum. Of course passive hyperæmia is present, nutrition is impaired, and the lung epithelium becomes fatty. The œdema finally disappears, and the alveoli collapse, the whole eventuating in a dry, dark, pigmented mass, the so-called "*slaty induration.*"

The desquamative pneumonia may invade only a lobule or an entire lobe, hence the "*caseous lobar*, or *lobular pneumonia*" of authors. The lobar form usually occurs at an apex which has passed the early stages, perhaps cavities have formed. A sudden acute exacerbation of all the symptoms occurs, and in a few days the whole upper lobe becomes consolidated. Such an attack is often mistaken for *intercurrent croupous pneumonia*, and unfortunately autopsies are quite frequent enough to enable us to study the lesion, when we find the lung reddish-gray, of a fleshy consistence, exuding an abundant sticky albuminous fluid on section.

Cavities arise from dilatation of the softened inflated bronchi by the respiratory act in the acute or early stages, but are most often due to the falling away of softened masses of caseation.

The age of a cavity may be judged by its shape, the younger one being more irregular and ragged, the older one frequently smooth inside, exuding a purulent, often putrid fluid. We sometimes find small branches of the pulmonary vessels crossing a cavity like fine filaments, the surrounding tissue having fallen away from loss of vitality. In these cases it is easy to see how even a fatal hemorrhage can ensue from the rupture of one of these isolated vessels.

If a cavity open into the pleura we find, of course, a rapid *suppurative pleurisy*, and the condition named *pneumo-hydro-thorax*.

It is interesting to inquire if cavities ever heal. We have no doubt that *smaller* ones may heal by cicatrization, as many autopsies have shown such results, but it is very doubtful if a large cavity ever heals, although arrest of the disease sometimes prolongs life for a long time.

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DR. BREHMER'S MODEL SANITARIUM FOR THE TREATMENT OF PHTHISICAL PATIENTS IN GOERBERSDORF.

BY P. H. KRETZSCHMAR, M.D.

Dr. Brehmer is the author of a well known work on "Chronic Pulmonary Consumption and Tuberculosis, and its Treatment." As long as twenty-five years ago he spoke of "the elevated regions" as the proper place for consumptives to live in, and published his new theory about the small size of the heart being an important factor in the etiology of phthisis. Since, he has at many occasions and under most unfavorable conditions, defended his ideas about the *curative* influence of living in high altitudes in cases of phthisis.

Although opposed by most of the German authorities, he undertook to demonstrate the truth of his assertions by actual experiments, and established the sanitarium at Goerbersdorf about twenty years ago. Of course, as Brehmer says, neither the reduced atmospheric pressure nor the rarefied and pure air alone, should be regarded as *specifics* for the cure of consumption, and it is indeed a mistake, frequently made by practitioners to send phthisical patients to some place situated within the region of more or less perfect immunity from phthisis, and then to allow them to take care of themselves according to their own judgments. The proper management of each individual case, the judicious administration of nutritious food, stimulants, and, if necessary, of drugs, together with a constant and abundant supply of pure air under reduced atmospheric pressure, have, in Brehmer's hands, during a period of over twenty years, proved to be the best means for the treatment of phthisis in its different varieties and in all its stages. The merits of the influence of high altitudes on consumption have been discussed extensively; I simply intend to bring before the members of the Society a reliable description of that institution where all the factors, "high altitude," together with "careful medical supervision" and "good common sense management" are found almost to perfection.

Goerbersdorf is located in Silesia, in the district of Breslau, near the Bohemian border. The village lies in a valley, 1,900 feet above the level of the sea—not 1,720 feet, as has been stated until very lately. The valley is longer than broad. The mountains which surround it, many of which are almost 3,000 feet high, do not seem to crowd upon it, they simply protect it from the unfavorable influences of sudden changes of

temperature, great storms, etc. The sanitarium itself is erected on an open space amidst a large pine forest. The exhalations of the pine trees contain considerable of the vapors of oil of turpentine, and they are continuously causing the presence of a large amount of ozone in the air. Whatever the real therapeutical value of ozone may be, its presence certainly has a great influence on tissue changes or secondary assimilation, and thereby it helps to bring about an improved state of nutrition. It is or this reason that ozone takes a prominent position among the remedial agents for the cure of consumption. The temperature of Goerbersdorf is moderately cool, not as changeable as that of many other health resorts. Great differences between the mid-day's heat and the evening's coolness affect consumptives more unfavorably than other patients. It is the frequent and sudden change of temperature which interferes much with the good results otherwise obtained in some of the more southern places. The meteorological observations made in Goerbersdorf during the last five years show, that the five summer months—May, June, July, August and September, together 153 days—are made up of 100 to 103 clear and bright days, 20 to 23 cloudy ones, about 28 with changeable weather, and only 14 rainy days.

The following favorable conditions make Goerbersdorf a desirable place for consumptives to live in :

I. The location within the region for immunity from phthisis.

II. The moderately cool climate and its stability.

III. The pure air, being exceptionally rich of ozone.

IV. The purity of the water, its remarkable freedom from all mineral substances.

V. The gradually rising plateau and the beautiful parks, which offer an excellent opportunity for judicious exercise of the pulmonary organs.

VI. The shade and the exhalations of the neighboring pine tree forests.

The world-wide reputation of Goerbersdorf depends, however, not so much on these natural gifts which exist also in numerous other places, but on Brehmer's peculiar ways of using them and other means to treat pulmonary difficulties. The doctor's method of managing consumptive patients is in most parts original with him. The principal features of it are :

I. The daily use of the cold douche, and the modified use of cold water in general.

II. The extensive use of cows' and goats' milk

III. The regular administration of "Hungarian" wines.

IV. The peculiar way of preparing the patients' food.

V. The careful regulation of the patients' way of dressing, and their mode of living generally.

VI. The constant and strict medical supervision of the patients.

Though no *one* of these natural gifts or peculiar regulations may have any decided favorable influence on the condition of a diseased lung, *collectively* they have proven to be of the greatest value.

The influence of altitudes on consumptives, the conditions necessary to constitute an *ideal* health resort for phthisical patients, and the natural advantages of one place over another, have been extensively discussed by excellent writers in this country and in Europe. Goerbersdorf has always been recognized as an excellent place.

The *peculiarities* of Brehmer's treatment deserve more than a passing notice.

The use of the *cold douche or shower bath* has been introduced into phthisis-therapy by Brehmer himself. It has proven to be a remedy of great value, not only in cases of consumption, but also in the acute form of catarrhal pneumonia. Its action is threefold. The shower bath possesses great *sedative powers* if applied for any considerable length of time, or at long intervals ; as it is used in Goerbersdorf, it has, however, *a tonic* influence ; it helps more than almost any other remedy in subduing the febrile symptoms of consumptives, and its application has, finally, a most remarkable influence on the respiratory movements. "If a stream of water is directed against the back of the head, over the region of the medulla oblongata, a spot soon will be found, the irrigation of which produces violent respiratory efforts."* If it be admitted that the *diminished* expansions of the apices as compared with other parts of the lungs, favor the retention of secretions within the alveoli, it cannot be denied that forced respiratory movements will help to throw off these elements of danger. The influence of retained secretions on the lining membrane of the air vesicles, especially if there is any predisposition to pulmonary disease, is very detrimental ; it is a frequent cause of many cases of catarrhal phthisis, and it is especially in those cases where the catarrhal origin of phthisis is apparent that the good effects of the cold douche are observed. Even Brehmer's opponents admit now, that the douche is one of the most reliable and most powerful remedies against night sweats. The temperature of the water is *always* cold, it is kept between 50° and 55° F. The douche is never given but once a day, and the time occupied is from five to forty-five seconds.

The stream of water, from one-third to one inch in thickness, is applied either in a horizontal direction, or, and more frequently, it is directed upon the patient from above. After the application of the douche—which, on account of its powerful action is in all instances given by the

* Jurgensen, Ziemssen Encycl. Vol. 5.

doctor himself, or by one of the medical gentlemen connected with the institution—the patient is handed over to the nurse and given a thorough rubbing down. In most cases, this procedure is followed by the administration of from one to two tablespoonfuls of good brandy, and moderate exercise in the open air.

Very debilitated patients cannot avail themselves of this powerful remedy; they are, however, subjected to the use of cold water in other forms, such as cold sponging, etc.

Milk, taken in large quantities and often through the day, is one of Brehmer's favored remedies; he relies more upon its use, and that of good fresh butter, than upon kumiss or cod liver oil. In fact, neither cod liver oil nor kumiss have been used in Goerbersdorf lately. Not only pure cow's milk, but also goat's and ass's milk is used. Forty to fifty cows, the same number of goats, and half as many asses are kept at the farm connected with the institution, and are furnishing from 60,000 to 70,000 liters of milk annually. The patients take milk regularly four times daily; it is generally given cold, sometimes luke warm.

Stimulants, in moderate doses, regularly administered and mostly given with the meals, are part of Brehmer's treatment. He claims for them, first, that they help to decrease the temperature, and act in this respect as anti-pyretics, and second, that they help to assimilate ordinary food, and more especially fatty matter of any kind. *Hungarian wines* are used almost exclusively, they are preferred on account of the larger quantity of phosphate of lime and magnesia which they contain. The wine is given at stated intervals, and in certain quantities, according to the direction of the attending physician.

The peculiar way of *preparing the patients' food*, and the regulation of the time for taking meals, is noteworthy. The bill of fare is made up daily by Dr. Brehmer himself, and due attention is paid to the consideration of the proper proportions between nitrogenous food and carbohydrates. Between 7 A. M. and 7 P. M. the patients take five meals. The dishes are prepared as rich as possible; a prominent medical man said, "The food they receive swims in fat." It is to the administration of those large quantities of fat, fresh butter, pure milk, good wine, and the use of the cold douche, together with the abundant supply of purified air to which the opponents of Brehmer's theory about the curative influence of high altitudes atribute his excellent—and undisputed—results in the treatment of phthisical patients.

The *regulations in regard to the patients' mode of living* are only few, but nevertheless important:—"Arise early and retire early; spend as much time as possible in the open air; take moderate exercise; while walking, keep the mouth closed, breathe through the natural channel,

the nose ; positively avoid any kind of excitement ; gentlemen are forbidden to smoke ; ladies are not allowed to wear corsets or long trains." A large park, full of beautiful plants, with nicely arranged paths and numerous resting places gives ample space for exercise. The patients read, write and play out doors ; the windows of the large sleeping rooms are constantly kept open during the day time, and the majority of patients sleep with open windows. The evening and night air is not threatened as much in Goerbersdorf as it is in most parts of the world. On rainy days there are large and well ventilated reading and sitting rooms, and two large green-houses, where the patients pass their time.

It is one of Brehmer's leading principles—and an excellent one it is —not to treat phthisis pulmonalis as a disease, but to treat each patient individually, according to the peculiar pathological condition which he presents. In the management of his large institution, Dr. B. is assisted by three physicians ; the patients are therefore constantly under medical supervision. They receive almost daily advice, as to the distance they should walk, the manner in which to exercise the muscles of respiration, the exact time they should rest, etc. etc.

The local treatment of diseases of the air passages, and more especially of the larynx, is often resorted to. Several of Waldenburg's apparatus are kept, and used in appropriate cases, and inhalations of various substances are employed if indicated. Drugs are, generally speaking, not among B's favorites. Phosphates of lime and magnesia as well as the different preparations of hypo-phosphates are given in many instances. Narcotics and expectorants only in exceptional cases.

A few remarks about the results obtained in Goerbersdorf may be interesting. To place any confidence in, and to attach any value to, statistical reports of any kind, and more especially to those in regard to phthisical patients, it is first of all necessary to know something about the person who made these statistics. It is, in this case, as in many others, the informant has a personal interest in giving the most favorable reports. The character of Dr. B., however, is above reproach, and men like Felix v. Niemeyer, Prof. Seitz, Paul Niemeyer, Waldenburg, Kuntze, Juergensen, Rühle have repeatedly expressed their admiration for Brehmer. To reach a correct diagnosis as to the extension of the disease, the medical gentlemen connected with Goerbersdorf do not—as we all do—depend on physical exploration only, but they examine the sputa of the patient bi-weekly microscopically for elastic fibres. In this manner they can with the greatest amount of certainty decide whether a given case belongs to the stage of infiltration (consolidation), or whether active destruction of lung tissue has commenced. The examinations made in seventy cases* show that in many instances where the physical

* Deutsche Medicinische Wochenschrift, Nos. 6, 7, 8, 1878.

signs did not indicate the loss of any lung tissue, elastic fibres were found to be present in the expectorations of the patients, proving the existence of more extensive disease.

B. accepts three stages of phthisis ; the first stage is that of consolidation, the second is that of the destruction of parenchyma, and the third includes all cases of advanced destruction, with the well-known symptoms of hectic fever, great emaciation, and more or less collapse.

"Cured," as used in the following report, means in the first stage restitution to normal lung tissue, disappearance of all pathological symptoms and signs ; in the second stage, cicatrised cavities and permanent disappearance of elastic fibres in the expectorations ; in the third stage, freedom from hectic fever and from night-sweats, permanent stand-still of the local process, if possible, cicatrization of the existing cavities, and great improvement of the general health. "Almost cured" means a condition which closely resembles that of "cured." I shall, however, give such figures only which refer to "entire recoveries," and include cases which have been "almost cured" under the head of "benefited." During the last five years there were on an average annually 512 patients in Goerbersdorf, each one remaining somewhat over 90 days. Of these 91 per cent. were benefited, while 9 per cent. either remained in statu quo or grew worse.

In 1874 the number of patients was 533. Of these were 220 in the first stage, remaining each 99½ days ; cured 59 —26·8 per cent.

210 in the second stage, remaining each 95½ days ; cured 11—·5 per cent.

103 in the third stage, remaining each 67½ days, cured 1—1 per cent.

In 1875 the number of patients was 575. Of these were 182 in the first stage, remaining each 93 days, cured 61—30 per cent.

187 in the second stage, averaging 105 days ; cured 17—9 per cent.

Of 206 in the third stage 1 was cured.

In 1876 the number of patients was 512. Of these were 190 in the first stage, remaining each 97 days ; cured 63—33.15 per cent.

206 in the second stage, each 100 days ; cured 9—4½ per cent.

116 in the third stage, each 70 days ; cured 1.

In 1877 No. of patients 457. Of these were 167 in the first stage, remaining each 86 days ; cured 44—26.3 per cent.

163 in the second stage, each 103 days ; cured 12—7.3 per cent.

127 in the third stage, each 81 days ; cured 3—2.3 per cent.

CONCLUSIONS.

I. Phthisis in its different varieties and in all its stages has been cured

repeatedly by a comparatively short residence and treatment at Goerbersdorf.

II. The location of the sanitarium within the region for immunity from phthisis has probably a very favorable influence on the condition of the patients.

III. Brehmer's peculiar method of treating his patients is that of "common sense" and "good judgment."

IV. The advantages of a health resort like Goerbersdorf, gained by its location, is partly, at least, counteracted by the unfavorable influence which the presence of so many sick persons must necessarily have on each patient's mind

V. Brehmer's method of treating his phthisical patients ought to be considered and adopted by the medical profession of this country.

Ἀσκληπιὸς ὁ Σωτὴρ

Χαρμα μέγ' ανθρωποισι, κακων θελκτῆρ' οδυναων.

Hymns of Homer, No. XVI.

PROLIFERATIONS.

——A SPECIAL MEETING OF THE SOCIETY to continue the DISCUSSION on PHTHISIS will be held at the Rooms on WEDNESDAY EVENING, DECEMBER 10th. Due notice will be given by the usual Postal Card, but as the Society directed the President to arrange for such continued discussion, he trusts that the meeting will be largely attended, and that members will come prepared to make short addresses based on the Papers published in this number of the PROCEEDINGS. The addresses will be stenographically reported.

——"What is it, Doctor?" "It's twins." "By Gemini."

——A Veteran Aspirant for Gynæcological Fame.—The following letter (names omitted) is respectfully submitted to the American Academy of Medicine, Advocates of Higher Professional Standards, and School-masters generally :

Office of —— —. ——, M. D.
Office and Residence Adjoining —— Savings Bank.
—— Pa., Nov 18 1879

Prof——

Dear Sir I reacd Yesterday Youre Annual Annoncement of College Hospital I am contemplating Spending a Couple of Months in the city this winter to Post up on Uterine and Duseases peculuer to Females Can I hav a Good chance fer Practis in the Hospital or under a Profesor it Something Practil that I want I hav ben in Practes for 25 years But in the future I Shell make a Speshalty of those cases if So what will it cost me Rispectfully —— —. ——

I Practis the Eclectic School

——Benzoate of Soda, according to Dr. Letzerich, of Berlin, has the property of putting a stop to the "vegetation of the diphtheritic poison." Dose, from 1 year to 3 years, from 7 to 8 grams dissolved in $3\frac{1}{2}$ oz. of menstruum, this amount to be given in 24 hours ; from 3 to 7 years, 8 to 10 grams ; over 7 years, 10 to 15 grams ; adults take 15 to 25 grams, in $4\frac{1}{2}$ oz. of solution. The pseudo-membrane is dusted with powdered benzoate, applied through a glass tube or quill, two or three times a day. Older children may use a gargle of 1 part to 20. The temperature and pulse together decline under this treatment. The pseudo-membrane contracts and becomes thinner and more transparent.

——Klein's Atlas of Histology.—The latest number, Part VIII., of this admirable publication of Drs. E. Klein and Noble Smith is devoted to the blood vessels and lymphatic glands, including the development of capillaries. This is one of the finest numbers yet published, and that is very high praise. The work as a whole is a great success, and we hear with pleasure that its publishers, J. B. Lippincott and Co., have exceeded their hopes in the length of their subscription lists.

——Dr. Thomas F. Pinchen died suddenly, Nov. 8, at the age of 33, having fallen dead in the street. The verdict at the coroner's inquest assigned the cause to apoplexy. The deceased was a native of Ireland, and had been only two years in the country.

——Virchow Canonized.—When Dr. Schliemann made his trip to the Troad last Spring, Prof. Virchow was with him. The fame of the latter, as a great healer, spread far and wide, and hundreds of sick folk flocked to him from all parts of that benighted region. There are no roads in the country, and all the transportation for the very infirm was on mule or horse-back ; some were carried in great baskets slung upon the back of a horse, sometimes one on each side, by way of balance.

While Virchow was there he had occasion to dig a well to obtain good water. Since he left, the people of the country have transferred their veneration to that well, and have carefully fenced it in with stones. It is called "the Doctor's Well," and magical virtues are ascribed to it. All come to it to draw water. One journal speaks of it as "Saint Virchow's Well."

——The Eclectic Magazine for December is adorned by that friend of sound learning, in medicine as elsewhere, the Rev. Dr. R. S. Storrs, of Brooklyn. A brief biographical sketch accompanies it.

——Lectures on the Theory and General Prevention and Control of Infectious Diseases, by James Russell, M.D., and on Air, Water Supply, Sewage Disposal and Food, by William Wallace, Ph. D., delivered under the auspices of the Lord Provost, Magistrates, and Council of Glasgow, and now published by them. James Maclehose, Glasgow, 1879. Pp. 213, Six plates and other illustrations. Price one shilling. A series of eight lectures, popular in tone, dealing with elementary public hygiene, the reading and publication of which is a monument to the credit of the city authorities of that town.

——Analysis of the Urine, with special reference to the diseases of the Genito-urinary organs, is the title of a new book issued by D. Appleton and Company. By K. B. Hofmann, Professor in the University of Gratz, and R. Ultzmann, of the University of Vienna. Translated by T. B. Brune, M. D., and H. B. Curtis, Ph. B. This is a volume of 269 pages, well indexed and fully illustrated. Its merit is attested by the fact that it was translated from the German into three other languages during the first year of its publication.

——St. Thomas's Hospital Report.—New Series, Vol. IX. Edited by Dr. Robert Cory and Francis Mason, Esq. London, 1879. This book of 360 pages has an interesting assemblage of medical and surgical papers by Drs. Bristowe, Ord, Mason, Nettleship and others of the staff of this ancient hospital. Dr. Cory contributes a thesis on the subject of cow-pox and horse-pox as related to small-pox. If his conclusion is true, he must regard small-pox as the source not only of the cow-pox, but also of the horse-pox; Jenner being most probably correct in his observations, whether all his inferences are tenable or not, as to the production of cow-pox from the variolous affection of the heels of horses.

——Annual Dues for 1879 in Arrears.—Mr. George Duncan, the Treasurer's Collector, is very desirous of completing his collections for the year, and securing a clean bill of health from the Treasurer. Members of the Society in arrears for 1879 will confer a great favor on the treasury by impatiently awaiting the collector's visit, and promptly responding to his honeyed words.

——Colored Coachman.—See advertisement on page 337.

——The Regular Monthly Meetings of the Medical Society of the County of Kings are held at 8 P. M. on the third Tuesday of each month, at Everett Hall, 398 Fulton Street.

The December meeting will be held on the 16th, at which there will be presented the following papers :—

"General Paralysis of the Insane Clinically and Pathologically," by Dr. J. C. Shaw.

"A Ready Method of Testing Pepsin," by Dr. J. Merritt.

At this meeting nominations will be made for officers of the Society for 1880.

——New Members.—At the November meeting the following new member was elected: J. J. Gleavy, M.D., Bellevue Hospital, Med. Coll. 1872. The following were proposed for membership : Drs. Ernest Palmer, 270 Clinton Street ; B. S. Van Zile, 171 Willoughby Street ; and W. Waterworth, 1153 Fulton Street.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

OFFICERS AND COMMITTEES FOR 1879.

President.....J. S. Prout, M.D., 167 Clinton St.
Vice-President.....C. Jewett, M.D., 310 Gates Ave.
Secretary.....R. M. Wyckoff, M.D., 532 Clinton Ave.
Assistant Secretary.....J. H. Hunt, M.D., 419 Hart St.
Treasurer.....J. R. Vanderveer, M.D., 301 Carlton Ave.
Librarian.....T. R. French, M.D., 469 Clinton Ave.

CENSORS.

F. W. Rockwell, M.D. (Senior Censor), 6 Lafayette Ave.
G. W. Baker, M. D., 48 Bedford Ave., E. D. B. A. Segur, M.D., 281 Henry St.
A. Hutchins, M.D., 796 De Kalb Ave. L. S. Pilcher, M.D., 4 Monroe St.

DELEGATES TO THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

(1878 to 1882.)

Drs. J. C. Shaw, Drs. A. J. C. Skene, Drs. E. N. Chapman,
J. D. Rushmore, G. G. Hopkins, J. S. Prout,
R. M. Wyckoff, A. Mathewson, F. W. Rockwell.

Chap. XI, Art. 2, of By-laws: "Any Member elected as Delegate to the Medical Society of the State of New York, who shall be unable to act as Delegate during two successive years, shall be considered to have vacated his position as Delegate."

COMMITTEES OF THE SOCIETY.

HYGIENE.

Drs. T. P. Corbally, J. Walker, W. E. Griffiths, B. Edson, A. W. Ford.

REGISTRATION.

Drs. R. W. Wyckoff, Drs. W. G. Russell, Drs. R. M. Buell,
W. E. Griffiths, N. Matson, A. S. Clarke,
J. A. Jenkins, F. W. Rockwell.

PUBLIC INSTRUCTION.

Drs. A. J. C. Skene, C. L. Mitchell, E. R. Squibb, J. T. Conkling, J. C. Hutchison.

PHYSICIANS' MUTUAL AID ASSOCIATION.

Drs. B. A. Segur, W. W. Reese, J. H. H. Burge, A. Hutchins, W. G. Russell.

PROCEEDINGS

OF THE

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

STATED MEETING, DECEMBER 16, 1879.

GENERAL PARALYSIS OF THE INSANE, CLINICALLY AND PATHOLOGICALLY.

BY DR. J. C. SHAW.

I desire to direct your attention, briefly, and in a very general manner, to a form of insanity which is quite common, and whose pathological anatomy is fairly well known. The term general paralysis is a bad one, for the reason that the patients suffering from this disease are not paralyzed, and if they ever become so, it is in the final stages of the disorder; but this is a name which has been in use for so long that I have so entitled my communication.

The clinical history is curious and somewhat varied. Every medical man who meets with a case of insanity presenting delirium of wealth and grandeur, concludes very quickly that he has to deal with a case of the disease under consideration, and he is generally right; now this delirium of wealth and grandeur appears to be well known to the profession at large as a symptom of this disease, and it is looked upon, if I mistake not, as the evidence on which to make the diagnosis, but there are somatic symptoms of greater diagnostic import which are little known to the profession at large.

I will begin by considering some marked clinical cases, so as to bring before you the differences which occur in the symptomatology, and then to show ultimately that there are four (4) principal types of this disease:

A case, in which the delirium of grandeur and wealth are very marked, male; 31 years of age; merchant; of moderate habits; was arrested by the police, and brought to the asylum with certificates in lunacy; the commitment papers state that while in the station house he was exceedingly wild and demonstrative, breaking things around him; says that he was arrested on a charge of murder, because he vanquished all opponents in the prize ring, speaks of himself as a man of great wealth and importance; for the first few days after his admission, he was noisy, stupid, and destructive, tearing up his bedding and clothing, and talking incessantly. After this we could make out distinctly delirium of the most extravagant character; said he had stores in great number, and would go about the hall, taking brooms and bed clothes from other patients' beds, all to his own room. When asked what he was doing that for, said he was taking them to his stores; he owned numbers of theatres, in which he gave performances, always acting the principal parts himself; frequently connects God with his worldly projects, speaks of a theatrical performance in which he and the Lord are going to play the principal parts; again says that the Lord is his backer, and lends him all the money he wants to go into business with, from which he realizes $100,000 a day.

He has no pupillary alteration, but slight tremor of facial muscles; on June 26 he had an epileptiform seizure followed by left facial paresis, which gradually passed off; patient's extravagant delirium varies every day; as I walked into the hall one morning, he came up to me in a jolly, laughing manner and said, Doctor, I am going to give each one of these sparrows a barrel full of mustard to prevent them from having the "belly ache," at another time he said Dr. Mott had delivered his wife of 15 babies at once, after which a rubber balloon came out of her mouth and went up to the Lord.

This illustrates a group of cases in which the delirium of grandeur, wealth and extravagance is most marked, and where the somatic symptoms are very few; the psychic symptoms predominating; the mental faculties are very active; the patient is ever in motion, talking incessantly, passing from one extravagance to the other in rapid succession; always good natured and laughing, often making sharp and witty expressions. I call your attention to one or two points in the character of this delirium: there is nothing fixed about it, it is always changing, he does not say he has $100,000 and stick to it, but if you express surprise at his being worth only $100,000, he will say, oh, I am worth more than that, $500,000, or he will make it five hundred million.

No matter what they are talking about everything is enormously exaggerated and without any regard to the possible; witness his having a

barrel of mustard for a plaster for a sparrow; they make great plans for accumulating wealth without a consideration of the possibility of carrying them out.

CASE 2.—Illustrates a group in which the somatic symptons at the beginning predominate over the psychical symptoms; I first saw this patient in about February or March of 1878, in consultation with Dr. McLean; a gentleman aged 49, married; a few years before was thrown out of a carriage and struck his head; his health in previous years had been excellent; for several months past his wife has observed that something was wrong with him, he has been irritable and bad tempered, which previously he had not been; for a few weeks past he has been talking extravagantly about money matters, etc; when I saw him he was tolerably quiet, but became excited in conversing about his projects, talked in a very loud voice, walked up and down the room, and at times gesticulated wildly; the somatic symptoms were very marked, what there was of them, and they were so decided that there was no doubt but that they had existed for some time; the pupils were normal, but he had the most decided thickness and difficulty in speaking, almost amounting to stuttering; tremor of facial muscles; his psychic symptoms were, he intended to liberate Ireland by getting fourteen Cardinals, six of which were to come from America, they were to go to England to demand the liberation of Ireland; he was also going into speculations in cheese, etc.; this patient afterwards came under my care and the somatic symptoms were always more marked than the psychical, and the difficulty in speaking became so great that it was almost impossible for him to speak.

CASE 3.—German; aged 49; single; salesman; admitted Sept. 27, 1879. On admission is stupid in appearance, manner and conversation; was disconnected in his conversation; has no pupillary changes; but the most decided difficulty in speaking, thick and drawling; tremor of facial muscles and tongue, sleeps and eats well, but is somewhat hypochondriac; complains each day of some new ailment, (but this may have a pathological basis); says he does not eat, when he really eats ravenously; no delirium of grandeur; patient remained in this condition for about two months, when it was noticed that he walked about the hall, and picked up small pieces of dirt, straws from brooms, paper, etc., and put them in his pockets, or held them in his hand; on being asked what he was doing that for, said they were valuable, but could not tell how they were so; he will now talk more freely; he next begins to tear his clothes; one day he pulls out the fire place in a sitting room, and pulls dirt and mortar out of the chimney; is transferred to another hall; he looks pale and excited and has a cold perspiration on him.

December 8, for the first time talks extravagantly, says that he is the special adjutant of the Emperor William ; the Emperor never does anything without consulting him ; owns seven million dollars and all the iron works in America. Temperature 99½ ; tendon reflex almost absent.

Third Group.—German ; aged 50 ; admitted Oct. 28, 1879. Certificates say that for a year past he has shown signs of mental derangement, his ideas are confused and he attempts to leave his home at night, has lately been violent, threatening the life of his wife.

On admission he is stupid; does not appear to comprehend the simplest question he is asked, runs about the hall in a stupid manner but evidently trying to get out, for, as soon as the door is opened, he tries to get through it ; pupils are contracted ; has decided thickness and difficulty in speaking, tremor of tongue and facial muscles ; ataxia of gait ; tendon reflex absent. Temperature 99° F.; no delirium of grandeur or extravagance.

Fourth Group.—This group comprises a class of cases which are seen in private practice and are generally called "Softening of the Brain ;" a gentleman 44 years of age, sent to me by my friend Dr. Burge, in September, 1876.

As a young man, he was given to sexual excesses ; he has always enjoyed good health, is said to have had a chancre, but no secondary symptoms ; about two years ago he began to break down, he was sick for five or six months, and under the care of Dr. Burge. One and a half years ago had an attack of jaundice and general prostration, at this time he began to have sudden stoppages of speech ; if he was talking, suddenly he would stop and be unable to go on for a few moments, he says he knew perfectly well what he wanted to say, but appeared to have lost control of his vocal apparatus.

This difficulty continued until six months ago, when he was treated by Dr. Burge, and improved.

Six weeks ago went West, on a trip, during which time had only one stoppage of speech, which occurred last week, while on his way home. He says he always knows when these attacks are approaching ; there is blurring of vision, with general numbness of whole body, accompanied by a general feeling of weakness, and they usually come on when he is excited, from whatever cause.

Examination.—When he walks, he does so slowly, and with evident difficulty ; left leg appears to be most affected ; there is no dragging of feet—he lifts them, but moves them forward slowly, and in a somewhat uncertain manner, and with apparent effort, bringing them down flat and heavily on the floor; he has a feeling of numbness in feet, but no anæsthesia. For one and a half years has been completely impotent; some-

times has neuralgic pains in the legs, lasting in one spot for hours; sometimes has painful spasms in muscles of second toe of left foot; no formication, but pricking, at times, all over upper and lower extremities; no vesical or rectal difficulty. He has a slight thickness of speech, and tremor of facial muscles; has pain through forehead most of the time. His legs always feel cold. There is no disorder of special senses. (?) Muscular strength in both legs good; upper extremities show, with a pretty stiff Dynamometer, R. 60–70, L. 70–50. Memory bad; emotional and irritable; no delusion, hallucinations, etc.

I observed this patient for many months after; all these symptoms increasing. He eventually went into the country.

I have seen five or six of these cases in private practice; in one of these cases the symptoms were still more marked.

I will give the principal points, briefly and from memory, as I have mislaid my notes of the case. I think I saw this patient in the spring of 1877. A former General in the army, now occupying an important position in the Government at Washington; has been leading a very active life; he is about fifty years of age. He was observed to become dull, and not to take the same interest in his affairs as formerly; this condition increasing. When I saw him, he would sit in a dull, stupid manner, for hours; often he would sit in this state, with the newspaper in his hands, as if he were reading it, but it was clear that he was not; for more than half the time, it was found that he was holding it upside down, or even sidewise; if he went out alone, he could not find his way back; when spoken to, he would look up, make a short answer, and lapse into his old dull condition; occasionally he would continue to speak for a few minutes, but he did so with difficulty; he had very marked thickness of speaking and tremor of facial muscles; had very little memory or attention; in fact, every mental faculty was decidedly impaired. He had the same difficulty in walking that the previous patient had, but he was unable to describe his symptoms so accurately. This patient went to New Jersey, and I heard that he died very suddenly, one day, while in the street.

I have never had an opportunity of making an autopsy in one of these cases.

At the time I saw these cases, I looked upon them as a form of chronic meningitis; but, as my practical experience with general paralysis was not then what it is now, I was not able to assign them to their proper grouping. What I shall say, by-and-by, of the pathological anatomy, will not include this last group, as my classification of them is based upon the symptomatology.

We have now shown that there are four (4) principal groups of cases

in which the symptomatology is not alike, at least in the early stages of the disorder.

First Group, in which the psychic symptoms are very marked and the somatic symptoms quite slight.

Second Group, in which the somatic symptoms are quite decided, and have evidently been present for some time before the delirium shows itself.

Third Group, in which the somatic symptoms are of a very decided character, and in which there is no delirium; the psychic symptoms are of the order of dementia.

Fourth Group, comprise cases which are not taken to asylums, but are seen in private practice, and are usually called "softening of the brain." In these the somatic symptoms predominate, later the patient falls into dementia without any delirium.

As the disease advances there are more or less changes in the clinical picture; some symptoms cease and others appear, and a variety of complications may come on. We will trace briefly the entire clinical history, and then speak of some of the symptoms separately. After this first stage the somatic symptoms become more and more marked. Ataxia of gait begins to show itself, if it were not present before; they have periods of excitement lasting one, two, three days, or more, and in which they destroy their clothing, bedding, and everything that comes within their reach, smearing their excrements over themselves; this is followed by a period of comparative calm; they have from time to time epileptiform attacks, which may be followed by paresis of one or more extremities, or be hemiplegic in its distribution, and there may or may not be passing aphasia; they pass gradually into a demented state, in which they say less and less about their extravagant notions, the difficulty in speech becomes so much greater that it is often impossible to understand them.

A cachexia soon appears; the patient may look fat and stout, but you see that he looks pale; they begin to have trophic changes, shown by small ulcerations and blotches on the extremities and buttocks; they pass urine and feces where they sit; death comes about in several ways, either by reason of the bulbar lesion, from kidney disease, general exhaustion, or some other complication.

We will now consider some of the symptoms separately:

The contraction of one of the pupils is of rather frequent occurrence in this disorder; it may be present in one eye and remain so, or it may come and go. In the first case I have related to you I observed, one day, that the right pupil was contracted, it had not been so previously, two days afterwards it was not present.

The difficulties with speech are of several varieties, in some cases the

speech is a complete stutter, the patient says a couple of words as if they were jerked out, and ceases to speak, and then behaves as if he had concluded his sentence, such was the case with the patient I saw with Dr. McLean, that is, when the disease was well advanced ; in other cases the speech is only thick and indistinct ; then we have cases in which it is slow and drawling, in some well advanced cases there is a kind of mumbling way of speaking, so that it is almost impossible to make out the words they use ; these difficulties of speech are doubtless connected with definitely located lesions in the central nervous system.

The first form of difficulty spoken of, the stuttering variety, is doubtless connected with lesions of the medulla, the other forms are possibly connected with lesions in the cortex, or of the paths between the speech centres and the apparatus for speech. Ataxia of gait is of frequent occurence, it may be present before the mental symptoms appear, or it may come on after. The degree of ataxia varies in different cases. This ataxia is connected with a lesion in the posterior column of the spinal cord, as I shall demonstrate to you further on. With this ataxia, or even before it, the patient often complains of neuralgic pains, and which are really the lancinating pains found in typical locomotor ataxia, and which have the same physiological explanation.

The epileptiform attacks also vary ; sometimes they have a well marked attack lasting many hours, at other times the patient has a localized paresis, or even a complete paralysis, without there having been any convulsion observed.

I cannot do better than to describe to you a well marked and very interesting case taken from notes by Dr. Woodside in whose immediate care the patient was.

" February 23d, 1879, at 3:30 P.M., was attacked with clonic spasms of the muscles of the right side of face, neck and right thumb, which continued for several hours, the muscles of forearm, arm, right leg and right side of body were successively affected. All the convulsions had ceased at 9 P.M., the spasm of the muscles of the thumb and face were simultaneous at the offset of the attack, but when it had lasted about an hour there was a lull in the facial spasm, while those of the thumb and forearm were undiminished ; the next morning Dr. Shaw noticed slight spasm of the anterior tibial muscles of left leg with increased reflex action on that side ; for the next two days patient was unable to speak and refused food."

Invariably following these attacks there is paresis, if not complete paralysis, but this passes off. In some of the attacks the patient is quite unconscious. These epileptiform attacks are undoubtedly due to irritation of the cortex.

A distinguished French writer claims that anosmia is a common thing, even in the early stage of this disease.

I am unable to say anything definite at present as to the presence of this symptom in the early stages. In the first clinical case I have related to you the sense of smell was as keen and sharp as it was possible to be. In the more advanced cases it is certainly absent in every one of them; I found that, in a good many, if not all of them there was a very decided impairment in the sense of taste.

The tendon reflex is absent in almost all the cases, and is due to lesions of the posterior columns of the spinal cord. It has been the subject of a communication by me to the American Neurological Association and published in Dr. Seguin's Archives of Medicine, August, 1879.

The temperature in these cases is increased a little above the normal. The trophic changes consist in the cachexia before mentioned; small ulcerating sores form on the extremities; at other times numerous blebs appear, filled with a turbid or slightly bloody fluid; they burst, and ulceration of the part occurs; when the patient is obliged to keep the bed, bed-sores form rapidly from pressure on the part.

We will now pass to a rapid consideration of the most prominent changes which are found post mortem in this disorder.

On removing the calvarium, the sinuses and the dipolic vessels are found filled with dark blood; the dura is almost invariably abnormal—at least, in the advanced cases; a false membrane is almost always present, as will be seen on this specimen; in other cases a true hemorrhagic pachymeningitis occurs of varying extent. In one of my cases the hemorrhage is at least one-half to three-quarters of an inch thick in some places, as you will see on the specimen I show you. The leptomeninges are found very much thickened, and its vessels very tortuous; in some cases numerous pockets are found filled with serous fluid, and the entire pia is quite œdematous; the convolutions are atrophied, especially the frontal convolutions; often there are localized atrophies of the convolutions of the parietal lobes; the convolutions flare apart and make the sulci very wide, as you will see on the brain I show you; the ventricles contain more fluid than normal; the floor of the ventricles is seen to be covered with small pearly-looking granulations, the size of a pin's point to a pin's head. The spinal cord shows general posterior spinal meningitis; sometimes the meningitis is general; sections made in the cord often show gray degeneration of the posterior columns.

Histologic examination shows a true hemorrhagic pachymeningitis of various degrees. In a well-marked case, such as the gross specimen I have shown you, the changes are as follows, as you can see by this microscopic section and drawing: A false membrane is formed on the

under surface of the dura, the new vessels in this membrane rupture in places, and blood is poured out into the false membrane, and this may be repeated again and again, until the hemorrhage and false membrane reach considerable thickness, or one large hemorrhage may occur, when the membrane is already quite thick; this appears to be the condition in this specimen; this large clot appears to be free between the false membrane and dura; sections from the brain show that there are very decided changes in the walls of the blood vessels; the nuclei have become larger and more numerous; this is readily seen on a vessel lying horizontally. In some of the vessels which are seen in transverse section the increase in nuclei have become so great, and the cells are so heaped together, that at first one would almost believe he had before him a new tissue formed of round cells; this increase has become so great that the vessel is almost lost; in fact, the lumen appears to be obliterated, the perivascular space is completely filled and distended with these cells; most of the perivascular spaces are blocked up by cells, and their processes projecting from the walls of the vessels. Numerous branching cells are to be seen throughout the section sending their processes in all directions; these cells are characterized by a large quantity of protoplasm around the nucleus and long processes. Some of these cells are quite large; they contain one, two, or three nuclei; frequently these cells are to be seen sending their processes toward blood vessels, and these processes do really enter into the walls of the vessels, as has been shown by Mierzejewski; and he has also described the formation of new vessels in this condition. By careful focusing it can be seen that the entire field is studded with round cells, without processes, and having slightly granular contents; in places the neuroglia fibers are much increased, in others it is not so apparent; this condition exists in the cortical gray matter as well as it does in the white. The ganglion cells of the cortex are changed, but not to the extent that one would anticipate; they have undergone some atrophy of their processes as well as of the body; they are slightly pigmented, and they appear to be less numerous than normal.

The spinal lesion consists in a sclerosis of the posterior column, somewhat similar to that found in locomotor ataxia.

Every conceivable histologic change has been found in the brains of persons suffering from this disorder.

The cure of this disease is among the possible things—there are men who claim to have cured cases; the prognosis is, however, always bad, but from what we see of the morbid anatomy, there appears to be reason why we should not be discouraged in our therapeutic efforts. The remedies that have been tried are numerous. Ergot, counter irritation

by cantharidal collodion, the actual cautery, and tartar emetic ointment, Calabar bean and hyoscyamine I have tried so far without any special results.

In treatment, however, everything will depend upon how early we see and recognize the disease.

THE BROOKLYN DIET DISPENSARY.

BY MRS. GEO. STANNARD, *President.*

Having been appointed a Committee to bring the work of the Brooklyn Diet Dispensary to the notice of the Kings County Medical Society, I desire to present the following facts:

The Brooklyn Diet Dispensary, an Institution having for its specific work the supplying of properly cooked nourishing food to the destitute sick, was organized in January, 1876, and incorporated in 1877, by a few ladies who saw and knew of its great need. That there was need, the immediate and ever increasing demand has fully demonstrated, and this work being entirely supplementary to the work of the physician, deserves special notice from your respected society. None are so truly needy as the impoverished sick, languishing and dying from want of such nourishment as they have neither the means nor ability to supply, and as each application must be accompanied by an order from a responsible physician, this charity is almost entirely removed from the possibility of being imposed upon. The first depot for supplies was opened at 49 High Street, where we remained till May, 1877, when we removed to 21 De Kalb Avenue, a much more central location, and where the main depot is still located. We have opened branches at 110 Vernon Avenue, and 293 Sackett Street. It is only when we fancy one of these delicately prepared diets carried into some miserable home to a sick, and, perhaps dying one, that we realize the work of this Society, which supplies a want long felt, but met by no other charitable institution in the city. Medicine alone cannot repair or control the incessant waste of the body by disease, and while the physician may freely give his services, and the Medical Dispensaries their drugs, the patient dies, perhaps, being unable to digest the coarse food, badly cooked, which their friends are able to provide, if able to provide any, and it is only at the Diet Dispensary that the appetite, made fastidious by long suffering, can find food grateful to its taste and suited to its needs. Ever since its organization it has

met with the hearty co-operation of physicians in all parts of the city within reach of its benefits and familiar with its work, they, hailing it as a valuable assistance to them in their desire to aid to recovery those whom they are called to visit and who are too poor, oftentimes, to provide suitable diets for themselves.

The blanks, or orders, are furnished all physicians upon application to the Corresponding Secretary, or at either depot; and after their names are once received, they are again supplied with blanks as soon as we learn that those furnished have been exhausted. Beef tea tickets are also for sale to any one desirous of aiding their poor friends in this manner, which does not offend their delicacy, by feeling they are the recipients of public charity, and beef tea is also for sale at all the depots, and many physicians have recommended it to their private patients, all of whom have expressed their perfect satisfaction with the quality, which is the same as that given out gratuitously upon the orders of the physicians. We have numbered among our beneficiaries patients in the families of clergymen, physicians, merchants, tradesmen, mechanics, etc., from helpless infancy to hoary age, in reduced circumstances, and when we think of the constantly changing patients these diets represent, each diet representing usually one week, (although we have some chronic cases,) we can then realize to some extent the good done, and as the help is only given during their illness, when they are unable to help themselves, we are free from the danger of encouraging pauperism. Since January 1st, 1879, to December 1st, 1879, covering the past eleven months we have given out at 21 De Kalb Avenue, and 110 Vernon Avenue depots, 7,442 pints of beef tea, 534 pints of mutton broth, 20,623 pints of milk, 288¾ pounds of rice, 145 pounds of farina, 98½ pounds of oat meal, 33¼ pounds of barley, 21,029 eggs, 148¼ pounds of corn starch, 124 cans of condensed milk, and 403 glasses of jelly. The Sackett Street branch having only been opened a short time, the calls there have not been as many in proportion, probably owing to the fact that the physicians in that neighborhood are not yet aware of its existence.

It is a gratifying fact to note that similar institutions have been opened in Cleveland, Ohio, also in Cincinnati, and one in California, all of which are the direct outgrowth of the one established in Brooklyn.

We hope soon to establish a branch in the Eastern District, from which many calls have come to us, but as yet we have not felt justified in making the necessary outlay always incurred in extending the work; but we are trusting that the benevolent people in that vicinity will provide the means, when we will gladly listen to the call. In short, our work is *only limited by our treasury*, and as our friends contribute, we shall distribute.

DISCUSSION.

Dr. G. G. Hopkins was very glad to know that beef tea and other delicacies, nicely prepared, could so readily be obtained from store dispensaries; and this fact may be made available in the treatment of "boarding-house cases," where they do not relish Liebig's, Valentine's, and other similar preparations. He had already availed himself of this convenience, and recommended it as one of the best charities in the city. In addition to its legitimate objects, very good food, properly prepared, can be purchased at a reasonable rate for use in general practice.

Dr. H. B. White had been acquainted with the operations of this diet for some time. When he first heard of it, he said to himself, that here was a charity that we could all go to and help, without feeling that we were in danger of imposition, for every one knows that by giving too freely to the poor there is danger of creating paupers. But there are sentinels strewn around the portal of this charity, for, in addition to other requirements, the seeker of aid must come with a certificate from a physician.

Under these circumstances he concluded that it was pretty safe. Still, in spite of these regulations, a good many physicians are careless; they do not investigate cases before issuing their orders, and oftentimes "diets" are given to unworthy persons.

The speaker here mentioned two cases in illustration, one a man who had received the benefits of this institution for two years. On investigation, it was found that he was a carpenter, who, during the summer, worked at his trade for good wages, yet his wife, on a requisition from a physician, regularly drew supplies. The other case was where a woman represented that her child had diarrhœa. After drawing "diets" regularly for nearly two years, some of the ladies investigated the case, and, instead of finding a child in the last stages of a lingering diarrhœa, they found two fat, healthy children. This mother had been drawing rations all this while, and it would have continued had not suspicions been aroused and investigation been instituted.

Now these are only two cases out of many. Still, the managers do not wish to restrict their benefits; they want to extend them, but they do depend upon the physicians to prevent imposition on the part of those who ought not to have these diets, and to assist in distributing to those who ought to have them.

REPORT OF THE METRIC COMMITTEE APPOINTED MARCH 18th, 1879.

Your committee would respectfully report the following statement of the progress of international medical uniformity for 1879, so far as heard from hitherto.

Feb. 6th.—New York State Society requested its members to use the metric system in future papers, and orders it to be used exclusively in the published proceedings.

March 18th.—This committee appointed, after a paper by Dr. E. Seguin, on the utility of a proposed "Metric League."

March 24th.—New York County Society resolved that the metric system should thenceforth be used in its proceedings.

May 8th—At the Atlanta meeting of the American Medical Association, after hearing the designated reporter, the Association adopted certain resolutions unanimously, as follows:

I. To use the system in its transactions.

II. Inviting its use in papers presented in future, or reprinted.

III. Requests its use by hospitals, dispensaries, and faculties of all medical and pharmaceutical schools.

IV. Asks the collaboration of all physicians now familiar with the system in facilitating its acquisition by those not yet expert in it.

V. Authorized a *Metric Executive Committee,* the president *ex-officio* chairman, to give unity and rapidity to the movement.

July, 1879.—The officers in charge of the vital statistics of New York, Boston and other large cities announce that they use the metric system.

Aug. 8.—The British Medical Association met at Cork, and appointed a committee to report on the means of introducing the metric system to the medical profession in Great Britain, as follows: Dr. Clifford Albert, Leeds; Dr. Lander Brunton, F.R.S.; Dr. Sieveking; Dr. Fraser, Edinburgh; Prof. Harvey, Aberdeen; Dr. Quain, F.R.S., Chairman of the Pharmacopœial Committee of the General Medical Council; Mr. Ernest Hart, Chairman of General Medical Council.

Aug. 28th, 1879.—Medical section of "La Société Française pour l'avancement des Sciences," meeting at Montpellier, unanimously voted to present the plan of medical uniformity at the next International Medical Congress at Amsterdam.

Sept. 13.—At the Congress of Amsterdam the following conclusions were adopted, presented by the committee from the Congress at Geneva:

I. An international pharmacopœia must be adopted.

II. The metric system should be adopted to render all medical records uniform, both those of hospitals and private practice.

III. The Committee on Uniformity to report progress at the next Congress in England, 1881. The same committee was strengthened by the nomination of members from almost all the nations represented in the Congress.

This leads us far from the timid action, or inaction, which marked the beginning of this year. But even then the Kings County Medical Society was one of the first to move in the matter, and needs only make a step in order to regain its former advanced position. Therefore, we propose the adoption by this medical society of the following resolutions:

I. To adopt the metric system, and to set the example by using it officially and exclusively.

II. To urge upon its members the propriety of using it in their practice, publications, etc.

III. To request the medical boards of the hospitals and dispensaries of this county to adopt the metric system in prescribing and recording cases, and that the faculties of the medical and pharmaceutic schools adopt it in their clinical and dispensing departments.

IV. To invite the managers of all our schools to cause the metric system to be taught at all the degrees of instruction, as being the only quantitative language which would make us understand and be understood by twenty nations; the system which would save millions in computations, and a year of the school life of every child; the only system of mensuration adequate to the wants of our children in their medical, liberal, artist and scientific avocations.

[The above report was made by title, and referred to the Publication Committee. No action was taken on the resolutions appended.]

——WAKES.—The *Lancet* states that the authorities at Cardiff have interdicted the practice of holding "wakes," still maintained by the Irish population of that town. "We have frequently," it says, "pointed out the dangers of this custom, and trust that the authorities will support the effort to abolish this fruitful method of spreading contagious diseases."

THE BROOKLYN PATHOLOGICAL SOCIETY.

Regular Meeting, October 23d, 1879.

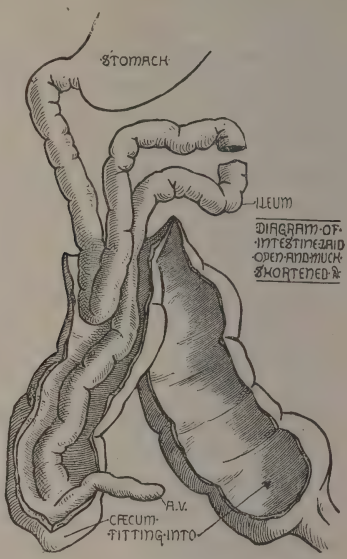
The President, Dr. F. W. Rockwell, in the chair.

DOUBLE INVAGINATION OF THE BOWEL.

Dr. J. H. H. Burge presented part of the intestinal canal of a male infant of six months, with a history as follows: The child had been healthy, except that for several weeks it had cried, as if in pain, before each alvine evacuation. On the 17th of October the bowels had moved as usual. During the following night it coughed a great deal, and appeared to have a cold. At 4 o'clock A. M., the 18th, it awoke suddenly, screaming with pain. On the Doctor's arrival it cried so incessantly as to interfere greatly with all attempts at examination. An enema of warm water was followed by a healthy pultaceous evacuation of moderate size. Gin and water, and, later, paregoric, were administered; both seemed to give very little relief. The countenance bore an expression of distress, even when the infant was not crying. The abdominal muscles were tense. No tumor could be felt. Towards noon a hemorrhage occurred, the blood being ejected forcibly. The estimated amount was two ounces. Another similar discharge took place in the evening. After the first hemorrhage all fluids taken into the stomach were ejected. Death occurred twenty-two hours from the time of attack. The case was seen, in consultation, by Dr. Geo. K. Smith.

Autopsy, twelve hours after death, made by Dr. B. F. Westbrook. The head was not examined. The *thoracic* organs healthy. The abdominal organs were all healthy with the exception of the alimentary canal.

The accompanying plates, drawn by Mr. Robt. L. Dickinson, a student at the Long Island College Hospital, show with great accuracy the condition of the intestinal tube. It will be observed that the parts represented include the stomach at one end and the rectum at the other; yet, when fully extended, the greatest measurement was thirteen (13) inches. The extensive double invagination of the intestine will be as readily understood by the drawing as by any minute description. Portions of the mesentery, which were included in the incarceration, are not shown, as they would have obscured the picture.



The colon contained a large portion of its own length [ascending portion], the whole of the cœcum with the appendix vermiformis, part of the ileum and also of the duodenum. The cœcum and most deeply intussuscepted portions of the colon were very much thickened.* Dr. B. remarked that the symptoms in this case were sufficiently marked to make a strong presumption of intussusception. The suddenness of the attack; the constant distress; the anxious countenance; the persistent

* It must not be understood that the duodenum was dragged in on account of its continuity with the rest of the small intestine. Only the lower (transverse) portion of the ileum was invaginated, and none of the jejunum. The transverse portion of the duodenum was drawn in by virtue of its attachment to the meso-colon. The last portion of the colon which was turned in being the transverse, dragged its mesentery after it, and this drew in the duodenum. This may be readily understood by referring to the transverse section of the peritoneum in Gray's Anatomy.—B. F. W.

vomiting, and the hemorrhage from the bowels were, in their totality, indicative of intestinal obstruction. On the other hand, the absence of constipation; the easy, natural and healthy evacuation upon the administration of an enema; the rather copious character of the hemorrhage; the inability to make out an abdominal tumor; together with the urgent cough of the preceding day, were confusing elements in the case. Again, the death from hemorrhage and shock, in so short a time as twenty-two hours from attack, is unusual.

STRICTURE OF THE INTESTINE.

Dr. A. R. Matheson presented the large intestine from a man æt. 61, a native of Ireland, who had died of intestinal obstruction.

The doctor had known the man for several years. He was a ship-carpenter by trade, and though accustomed to drink daily such liquor as is found in the shops along the river front, he never took sufficient to become intoxicated. On the 25th September, ult., after draining the dregs from a keg of liquor, he was seized with a severe pain in the epigastrium, accompanied by vomiting and diarrhœa. Some medicine given him at a neighboring drug store gave no relief. He was also attended by a physician, who did not succeed in helping him. When Dr. M. first saw him, on the 30th, he found him vomiting dark matter resembling coffee-grounds. He had vomited this matter at short intervals since the 25th. He had the most violent hiccough that the doctor had ever witnessed. The entire abdomen was tender, and the patient being delirious, resisted the attempts at examination. The temperature in the axilla was 103° F. The diarrhœa had ceased the day previous. To allay his thirst he was taking broken ice, milk, beef tea and ice-water. After the discontinuance of these substances and the introduction of suppositories of opium and belladonna, several hours of quiet sleep were obtained. On the 3d October he could retain small quantities of milk; hiccoughed occasionally; pulse, 120; temperature, 101°. The abdomen was tympanitic and tender. Injections of beef tea and milk, after being retained two or three hours, were returned without any admixture of fæces. Enemata and insufflations of air brought nothing away. By gentle palpation the doctor had succeeded in locating the obstruction in the descending colon, the intestinal gases being arrested in that locality. The patient's condition did not seem to warrant operative procedures. Dr. Jno. Byrne, who saw him in consultation, recommended the exhibition of a large dose of castor oil, followed by the injection of carbonic acid by means of a long, flexible tube attached to a syphon of carbonic acid water. By the time the preparations were completed, however, the patient was moribund.

The *autopsy* was made 12 hours after death, with the assistance of Dr. Maddren. The intestines were very much dilated and deeply congested. There was a small perforation, such as can be seen in an overdistended toy balloon, in the upper portion of the descending colon. There was an impervious stricture just above the sigmoid flexure. No adhesions. The intestines contained liquid fæces. The mucous membrane was congested, and covered by fibrinous exudation.

The stricture, evidently, was not of recent origin, but was made impervious by inflammatory action. There was no history of constipation. At the autopsy I could not force water through the opening; but at present, owing to the shrinking caused by its immersion in alcohol, a small opening is apparent.

SPECIAL ORDER.—DR. READ ON EXTRA UTERINE PREGNANCY.

The specimen which I presented at the last meeting of the Society came from a patient with the following history:

Mrs. W.; æt. 43; German; married; applied to me in May last, supposing herself pregnant six weeks or two months. She complained of constipation, with a pricking sensation in the lower bowel. I directed her to take a dose of castor oil, and heard no more of the case till the first of October, when I was called to see her for a supposed case of miscarriage. After attending to her she handed me the two specimens exhibited, wrapped up carefully, one of which proved to be a portion of the occipital bone of a fœtus. She stated that she had passed them in May last, after taking the oil prescribed then. On questioning her, she gave a distinct history of a case of extra-uterine pregnancy, occurring three years ago. She said that at that time she was pregnant, and noticed nothing unusual during her pregnancy. Labor set in at term, and she was attended by a midwife. Pains came on in the usual manner, and with great violence; a discharge took place from the vagina, bloody in character, which was supposed to be the water. After being in labor for several days, and nothing appearing, a physician was called in, who subsequently attended her until she was able to go out, which was not for nearly four months. She stated that a free discharge from the vagina continued, pain ceased, and that "inflammation" set in. She was very ill, and much reduced after her long sickness. After four months she was able to go about again, and went to a "college" for treatment—dismissing her physician. About this time she began to discharge per rectum a quantity of matter and offensive fæces, and then pieces of bone, which were kept by the doctors in attendance. The discharge continued, off and on, for nearly a year, when it ceased, and she was thought to be cured; and, indeed, had no further trouble from her affection till

last May she passed the fragment mentioned. Her family history was good, and she had good general health; but, though married twice, had never had a child at full term. She had had five miscarriages, at from two to four months, before the occurrence of the extra-uterine pregnancy. I wrote to her attending physician—a well-known member of the profession in New York—asking for his account of the case. He kindly replied, giving me his history of it. He was, he said, undecided as to whether it was extra-uterine pregnancy, or an ovarian cyst which had ruptured. He attended her through the attack of peritonitis and septicæmia, which followed the false labor; but left the case, through the interference of the husband and friends, before any portion of the fœtus had been discharged by the bowel. He had heard indirectly, after ceasing his attendance on her, that bones had passed by the bowel; but not placing much reliance on his sources of information, he was in doubt as to the case till he received my letter, three years and a half after the occurrences spoken of. This case, Mr. President, though its history is necessarily imperfect, and my connection with it was only after it had long since terminated, will serve as a text for my remarks on extra-uterine pregnancy.

Extra-uterine pregnancy may be classified according to the points at which the fœtus is developed. Dezeimeris makes no less than ten varieties; Cazeaux gives five; Parry, three; while Lawson Tait only admits the existence of one variety, namely, the tubal; all others being simply differences in the manner in which a gestation in the tube may terminate. Gaillard Thomas supports this view. Parry's division is the most rational, and, following him, we may divide extra-uterine pregnancy into three classes, namely, *Tubal*, Ovarian, Abdominal. These, again, may have modifications according to the point of arrest of the germ and its attachments. *Tubal* may be sub-divided, therefore, into *Tubo-Ovarian*—the germ being arrested in the pavilion, which contracts adhesions with the ovary; *Tubo*-Abdominal—the germ arrested in the same locality—the tube may contract adhesions with neighboring parts; *Tubal proper*—germ arrested in that portion of the fallopian tube situate between the pavilion and uterus; *Tubo-Uterine*—germ arrested in that portion of the oviduct which passes through the uterine wall. Ovarian, again, is divided into *Ovarian proper*—germ situated entirely in the ovary, which does not contract any adhesions with adjacent organs; *Ovario-Tubal*—germ contained in ovary which contracts adhesions with the pavilion. Abdominal, also, is divided into *Primary*—ovum developed from the beginning in a peritoneal cavity; *Secondary*—development commences in the tube or ovary, the cyst ruptures and the germ escapes, continuing to live and develop in the peritoneal cavity. Causes.—Insufficient data exist to make

the causes of this dreaded accident obvious. It is tolerably certain that more cases occur in women whose reproductive organs are in a pathological state than otherwise, and mental and moral emotions are believed to act sometimes as causes. SYMPTOMS.—These may be considered, 1st. During the first months of pregnancy when the fœtal heart is still inaudible. 2d. After the period when the fœtal heart is heard, and until after the close of spurious labor at term. 3d. After the termination of false labor, or death of the fœtus.

First period.—The usual symptoms of pregnancy appear, viz., suppression of menses, alteration of breasts, morning sickness, mental and moral peculiarities, etc., etc., and continue from the first two or three to eight or ten weeks, the patient believing herself pregnant, when, suddenly, without any warning, she is seized with an agonizing pain in the abdomen. This is a characteristic sign. The pain is extremely violent, preventing the patient from standing, or lying stretched out, and is accompanied by all the symptoms of collapse. It is felt in the hypogastrium, and usually on one side; is generally spoken of as a colicky pain, but is much more intense and alarming than colic, and is accompanied by more constitutional disturbance. After a short time the pain disappears, and the patient may appear restored to health, or only suffers moderately for some days or weeks, when she is again attacked with the dreadful paroxysm. These attacks may follow each other for some weeks, or the cyst may rupture in one of them, and the woman die from shock or peritonitis. The cause of the pain is probably to be found in the mechanical distension of the tube, or pressure on unyielding neighboring parts. The pain is less violent in abdominal than in tubal pregnancy.

Second symptom in the early stage of extra-uterine pregnancy, is the appearance of a bloody discharge from the vagina. The flow is not menstrual in character, and occurs irregularly. During its continuance the decidua is discharged either *en masse* or in small pieces. In the former case the patient is often supposed to have miscarried. *Vaginal examination* shows the uterus always enlarged; but not in proportion to true pregnancy of a like advancement.

Second stage.—All the usual symptoms of pregnancy continue, and those of extra-uterine gestation are more marked. The fœtal heart is heard, and quickening is felt; therefore the existence of the trouble is made evident, and it only remains to determine the variety. The violent pains cease after the fourth month, or become, at least, much more moderate, though they may reappear in the last two months of pregnancy. Examination of the abdomen shows a tumor on one side, and often the parts of the child can be made out. Palpation adds to the information,

and the fœtus can sometimes be made out, situated superficially. Vaginal examination gives the uterus enlarged, but only slightly so; and bimanual examination enables us to determine its size and location, disconnected with the tumor, it is usually displaced, most frequently pushed to one side and upwards above the pubis, making the os difficult of detection. This is a valuable sign—the existence of pregnancy having been previously made out. The tumor can always be felt in the vagina, usually in the cul-de-sac of Douglas. Generally it fluctuates, and the fœtal members can often be felt through the vaginal walls. *Ballottement* sometimes reveals the presence of the fœtus. The tumor usually interferes much with the action of the lower bowel. As the cyst enlarges the usual symptoms of pressure are apparent; interference with the bladder, œdema, cramps, etc., etc.

Third stage.—If extra-uterine pregnancy go on to full term, labor generally sets in as in normal parturition, the pains being of the same intermittent kind. The duration of spurious labor varies—generally lasting from two to three days; often much longer. Accompanying the pains a vaginal discharge takes place, which is bloody in character. Following the pains and vaginal hemorrhage is a discharge resembling the lochia, which lasts several days. The cause of the false pains is as yet a matter of conjecture. The cyst never ruptures during these pains; so that danger from this source, as well as from peritonitis, need not be dreaded. The only exception to this statement is in rare cases of *tubo-uterine* pregnancy, where the fœtus is expelled into the uterine cavity, and is delivered *per vias naturales;* and in still rarer cases of escape of the child into the vagina or rectum during the false labor pains. The child, if it have survived till the end of gestation, almost always perishes during false labor. The death of the child is usually accompanied by violent movements and struggles, which are the cause of great pain and annoyance to the mother. After the false labor has passed, the patient regains the non-puerperal state, and the symptoms enumerated all disappear. The child, if not expelled at the time, generally is discharged, after a longer or shorter time, through the fistulous openings, either into the rectum, bladder, vagina, or through abscesses opening externally. In rarer cases it becomes encysted, and is carried for years.

Only about one-half the cases of extra-uterine pregnancy, however, go on to full term; the remainder terminate in that most dreaded of accidents, *rupture of the cyst.* The symptoms are marked. After various attacks of colicky pain, suddenly a violent spasmodic pain seizes the patient in one of the iliac fossæ, and is accompanied by metrorrhagia. A sensation of internal rupture is experienced, which is quickly followed by all the symptoms of collapse—skin cold and clammy, pulse small and

feeble, syncope, depression, etc. The abdomen often enlarges, and there is a sense of fullness in the pelvic cavity, from the presence of effused blood. The patient may die immediately of shock or hemorrhage, though generally she survives several days, and is carried off by exhaustion or peritonitis.

Diagnosis.—This has been indicated; but I will specially emphasize three points, as indicating this grave condition of affairs, in the earlier months: 1st. The occurrence of the usual signs of pregnancy, and the belief on the part of the patient that she is *enceinte*, followed in a few weeks by the peculiar *agonizing, exhausting pain*, occurring repeatedly at short intervals. 2d. With the foregoing symptoms, *metrorrhagia*, irregular in character. 3d. With the others, *expulsion of the decidua.* The existence of these symptoms together should excite serious attention.

Prognosis.—This is grave. Is most unfavorable in the tubal and ovarian varieties. In the former, rupture of the cyst almost always occurs before the third month. The tubo-uterine is more favorable, as the fœtus may escape into the uterus. The abdominal is the most favorable—owing to the fact that there are no tissues near, which will not bear the distension caused by the growing ovum. The prognosis also differs very greatly according to the time of gestation. It is much more grave in the first half than in the last half of pregnancy; and if the patient reaches the latter part of the fourth month without rupture, she will, probably go to full term. The occurrence of spurious labor, also, makes the prognosis more unfavorable for the time, as accidents may supervene—collapse, peritonitis, etc. After the death of the fœtus, until the woman's system is restored to its normal condition, danger may arise from septicæmia. Discharge of the fœtal remains through the rectum, vagina, bladder or abdominal walls generally ends in recovery. The first of these is the most unfavorable mode. Septicæmia or hectic may occur in any of these terminations, but is usually recovered from. After the fœtus becomes encysted the patient may carry it for years without detriment; though any depressing disease—e. g., typhoid fever—may impair the nutrition of the cyst, and endanger the patient's life through inflammatory changes set up. Blows and falls are also sources of danger.

Dr. Pilcher had seen four cases, none of which developed beyond two months. He suggested the performance of laparotomy and treating the bleeding points.

Dr. Bunker spoke of the slight knowledge of the histology of the placenta, etc., in extra-uterine pregnancy. An investigation of this subject, aside from the practical results which it might yield, would go far toward solving some of the problems connected with the nutrition of

the fœtus. He instanced the theory of Ercolani, that the hypertrophied mucous membrane of the uterus has a glandular action, and produces a secretion for the nourishment of the fœtus. This "uterine milk" is actually found in the cotyledons of the placentæ of ruminants. It was difficult to suppose that the endothelium of the peritoneum could perform such a function.

Dr. Skene: Though I have seen cases of extra-uterine pregnancy, my observation has been so limited that I know less of this than of any other subject connected with obstetrics or gynæcology. Of its causes I know nothing. As to the diagnosis, the symptoms are obscure. If a complete history is obtained, or if one has the opportunity of observing the case from the commencement, a diagnosis may be made. But frequently a complete account is only obtained when it is loo late to do anything—that is when rupture of the sac occurs and the decidua is thrown off. This was illustrated in Dr. Giberson's case, in which there was only a suspicion of pregnancy up to the time of rupture and peritonitis, and even then the diagnosis was doubtful. Various classifications have been adopted; but, for practical purposes, I divide the cases under two heads: 1st. Those in which the ovum is developed in the abdominal cavity, without any connection with the generative apparatus. 2d. When it is attached to some portion of that apparatus. All the cases resemble each other in their early clinical history; but the later course and termination are different in the two varieties. In the ovarian and tubal pregnancies, electrolysis, in my opinion, promises more than anything else at our command. This form of treatment was illustrated in Dr. Reeve's paper read before the Gynæcological Society in Baltimore. The object is, by passing the current through the sac, to destroy the vitality of the ovum, trusting that it will be cared for by the natural processes, and prevented from doing harm in the future. In order to be efficacious, it should be employed early. And here a difficulty comes, in way of diagnosis; for, at the stage in which it would do most good, a prognosis is difficult. But when there is merely a suspicion, the patient ought to have the benefit of the doubt, as the operation is not, in itself, dangerous. In the abdominal variety laparotomy at full term, performed with the antiseptic precautions now used in ovariotomy, viz., ether spray and provision for drainage, is likely to be the treatment of the future, as it has already established, in the hands of Drs. Barnes and Thomas. Or, where the sac has been walled in by inflammatory deposits, and is accessible through the vagina, the operation of Thomas (opening the sac with the thermocautery) is advisable.

When rupture of the sac has occurred, it has been advised by some to perform laparotomy; but its usefulness must be limited; for, where the

hemorrhage and shock have prostrated the patient to a marked degree, the most daring surgeon would hardly venture to perform the operation, knowing that the patient would certainly die on his hands. In these cases, when the diagnosis has been clearly established, and when the hemorrhage and shock are tolerably well borne by the patient, but are progressing, the operation of laparotomy might be performed successfully. Theoretically, this operation promises much; but it has not been sufficiently tested practically.

GENERAL INFLAMMATION OF SEROUS MEMBRANES.

Dr. Jno. Merritt presented portions of the thoracic and abdominal viscera, illustrating inflammation of the serous membranes.

The patient, a male child, about three years old, was first seen by him in the course of his attendance upon another child, sister to deceased, who had scarlatina. The scarlatinal patient, an infant of eight months, died of meningitis, as revealed by a post-mortem examination.

He was then asked to see the little boy, who appeared irritable, with quick, shallow respirations, and a short cough, which seemed to hurt him. Dry râles were heard on auscultation; temp. 100°. On attempting to eat, the food was not swallowed. He was thirsty, and swallowed fluids. The case impressed the doctor as one of foreign body in the œsophagus, though no such history was obtained. On the 28th (four days after the beginning of the illness) a little girl, twelve years old, living in the same house, said that she had seen him swallow a peach-pit two weeks before. On the 31st there was no improvement; the child was emaciating rapidly, and had become pale. Prof. Bunker saw the case in consultation, and found the cervical glands of the left side, and the inguinal glands, enlarged. The same evening Prof. J. S. Wight passed a bougie (No. 8 Eng.) into the stomach, meeting with no obstruction. Physical exploration was impossible, on account of the child's cries and struggles. The treatment was supporting, viz., quinine, iron, wine, etc., with what milk he could be induced to drink. Dr. Wight saw him again two weeks later, and thought he was a little better. The cough, somewhat intermittent; at times very severe. Pain in the thorax was frequently complained of. There was profuse sweating about the head, but the highest temperature obtained was 101°. Dyspnœa became very severe on the 22d, and at 5 A. M., on the 23d Oct., he died.

Autopsy six hours after death. Rigor mortis not marked. Body extremely emaciated. The tissues very pale. There was a general and most intense inflammation of the *pleuræ* and *pericardium*. The pleural surfaces were everywhere adherent, and the *pericardium* was covered by a layer of villous fibrin. A nick in the pericardium gave vent to pus,

and the heart was literally floating in pus and covered with lymph. There was no obstruction of the œsophagus. The *abdominal organs* were covered by layers of lymph, the intestinal coils glued together. *Liver* normal; *spleen* congested, but not large; *kidneys* normal in appearance. The head was not examined.

The doctor regarded the case as one of scarlatina, in which the poison had spent its irritating powers upon the serous membrane, and instanced the meningitis occurring in the other child as a corroborating circumstance.

Regular Meeting, November 13th, 1879.

The President in the chair.

(Dr. Ernest Palmer presented specimens from a subject upon whom the operation of litholopaxy had been performed. The full account will appear next month, as, owing to Dr. Palmer's sickness, the history has not been obtained.)

DERMOID CYST.

Dr. Woodside, of the Kings County Lunatic Asylum, presented, for Dr. Shaw, a dermoid cyst, found in the abdominal cavity of a body on which an autopsy was made in that institution.

A colored woman, 48 years old, suffering from dementia, which dated back six months before her admission in May last. Her father died insane. She was married, and had two children, 31 (?) years ago. Had also had one miscarriage. She died August 8th. At the autopsy the brain was soft; the cerebro-spinal fluid in excess. There was a tumor starting from the crista galli and pressing up both frontal lobes. *Lungs* and *heart* normal. A dermoid cyst was found attached to the mesentery. It had no connection with the ovaries. There was disease of the kidneys and a large fibrous tumor of the uterus. The cyst contained considerable hair, a number of teeth and an irregular piece of bone. Its size was that of a large orange.

DERMOID CYST OF THE OVARY.

Dr. John Byrne presented an immense dermoid cyst, with the following history: The subject, a young married woman, 28 years old, had never been pregnant. About two years ago she noticed a swelling in the left side of the abdomen. Though menstruation was regular for several months, she thought herself pregnant. She was assured by several medical gentlemen that she was pregnant, though the menses were regular and abnormally profuse. On examination, Dr. B. found the uterus almost beyond reach; but it did not feel like a gravid uterus. On ex-

ternal palpation, a large tumor, the size of the uterus at the 7th or 8th month of gestation, was felt. On close examination, it seemed to spring from the right iliac region. On her return, two weeks subsequently, she was told that it was a tumor, and, at her request, Dr. Byrne consented to aspirate it for the purpose of completing the diagnosis. An appointment was made; but in the meantime she went to New York, and consulted an eminent gynæcologist of that city, who introduced a trocar through the vagina and drew off a few ounces of fluid resembling gruel. She returned to Brooklyn, with symptoms of peritonitis, and died in a few days.

Post-mortem.—The cyst was found adherent on all sides. In removing it the cyst ruptured, and some hairs, several 18 inches in length, and many shorter ones, were extracted. Besides the hairs, the cyst contained a large quantity of thick gruel-like fluid, a few teeth and pieces of bone.

——The Curator would be pleased to receive correspondence in regard to the exchange of microscopical slides. Address, Dr. E. S. Bunker, No. 280 Henry Street, Brooklyn.

☞*The Secretary requests members presenting specimens to present therewith a written account of the history and pathological appearances. An observance of this request on the part of the members would insure a much more satisfactory report of their cases.*

Benj. F. Westbrook, *Secretary.*

——Contagious Pleuro-pneumonia.—In Paris the method of dealing with this disease of cattle is by inoculation. Some of the serum from a diseased lung is inoculated into the healthy cow's tail. This latter, not infrequently, sloughs off, but the cow is proof against the infection. The principal objection against this measure of prevention is that it tends to multiply the foci of infection.

——Uremia.—It has been the fashion, on the authority of Frerichs and Gallois, to deny that the symptoms commonly known as uremia are due to the circulation of urea in the blood. Experiments made by injecting urea into the blood of dogs failed to educe uremic symptoms. Recently, however, M. Picard, of Lyons, has repeated these experiments on dogs, using larger quantities of urea, and has produced epileptiform convulsions, vomiting, urinary suppression, etc., demonstrating the necessity of further study of the effects of urea.

Ἀσκληπιὸς ὁ Σωτὴρ

Χαρμα μέγ' ανθρωποισι, κακων θελκτῆρ' οδυναων.

Hymns of Homer, No. XVI.

PROLIFERATIONS.

——Dr. J. C. Shaw's paper (published in this number) was read by title only at the December meeting, as the executive business continued to a late hour. At a subsequent meeting the author will present the specimens, etc., that should have accompanied the presentation of the paper, at which time the paper can be discussed. Any member of the Society interested in this and cognate subjects is cordially invited to visit the Asylum and observe this class of cases.

——The Physician's Hand-Book for 1880, by William Elmer, M.D., and A. D. Elmer, M.D. W. A. Townsend, 187 Broadway, N. Y. This popular standard manual, which has been issued for a quarter of a century, has been thoroughly revised and entirely re-written, with valuable improvements added, which will make it an indispensable ready prompter to every physician who has heretofore availed himself of its usefulness. Besides its Register of Daily Practice, so arranged that a correct account may be kept of visits made, office practice, surgical and obstetrical cases, medicine furnished, etc., it contains a new classification of diseases, and their most distinguishing symptoms, sequels, and complications, with the dietetic management and treatment indicated in each disease; a fully revised and classified list of poisons, with their symptoms, antidotes and treatment; asphyxia, and what to do in emergencies; chemical and microscopical examinations of urine; pulse in health and disease; the thermometer in the diagnosis of disease; abbreviations and definitions of the properties of remedial agents; medical weights and measures, and the metrical system; diagnostic record for every day in the year; index to diseases and remedial agents; chapter on incompatibles; examples of extemporaneous prescriptions, together with the Latin terms and phrases translated into English; and general memoranda and cash-book.

——The Diseases of Childhood Neglected.—Glancing at the work done by the profession in societies, public institutions, and literature, it is impossible to escape the impression of the paucity of attention bestowed upon the maladies of child-life, and the little interest they seem to arouse. The men who for a time made these diseases a special study have lapsed into silence, if not inaction, and however good the daily work done by the general body of our practitioners may be, the profession is not enlightened by their discoveries, or placed in possession of any improvement that may have been effected in treatment.—*Lancet, Oct. 18.*

——Littre, a great French physician, once said, "It is the history of medicine which makes it a science instead of a trade." In fact, a subject without a history is as tame as a river without traditions.—*Whittaker.*

——Violent Deaths in India.—Four thousand, nine hundred and fifty-three persons lost their lives in the last year in the northeast provinces of India and in Oude by wild beasts and snakes. Of this number seventy-five per cent. died from snake-bites.

——The water-carriage system of sewerage, which for so many years has been accepted as the best method of disposing of the refuse of cities, is rapidly falling into disrepute. The most recent attack upon it was made before the British Medical Association, by Dr. Andrew Fergus, a very eminent physician of Glasgow. He says, in effect, that the system is a failure, based upon an error in reference to the purifying properties of water. In respect of excretal matter, water has no power to purify it, or prevent its becoming a nuisance; it merely shunts it—takes it "from my door to deposit it somewhere else." The system is destined to come to grief, not only because it is unsalutary, but because it is costly and wasteful.

——The late Dr. Murchison, of London, was the model of an English physician, an authority on the subject of contagious fevers, and, what is higher still, a good and noble man. His favorite maxim in German was, "Wie Gott gibt mir, so geb 'ich dir" (as God gives to me, so give I to thee); and he remained faithful to it to the hour of his death.—*British Med. Jl.*

——Anuria.—The London letter in the *Am. Practitioner*, June, states that a man, aged 49 years, temperate and in good health, save a calculous history, had anuria lasting twenty days, and followed by recovery. Ziemssen records a case of thirteen days' duration, terminating in recovery.

——The Books and Instruments of the late Dr. Giberson are in the custody of Dr. Lowell. They can be seen at 173 Remsen Street, before 10 from 1 to 2, and from 7 to 8.

PROPOSED AMENDMENTS TO BY-LAWS OF THE MEDICAL SOCIETY OF THE COUNTY OF KINGS.

Chap. I., Art. 3.—Read *second* for "third" Tuesday. Add: The meetings in July and August may be omitted by vote of the Society.

Chap. II., in the Orders of Business, introduce explanatory references to chapter and section of By-Laws, after Art. 1, (2) and Art. 3, (4, 6 and 7). "At the December meeting," *et seq.*, to follow fourth order in Art. 1.

In Art. 3.—Insert *2. Report of Council on election of members. Chap. XIII., Art. 3;* and *4, Report of Secretary. Chap. V., Art. 4; Chap. X., Art. 5;* and 5. *Report of the Treasurer on Resident Members. Chap. VII., Art. 5; Chap. XII., Art. 6;* and 7. *Reading of the Journal of the Council. Chap. X., Art. 5;* and *8. Financial Report of the Treasurer* (*Chap. 7, Art. 4*). and *Report of the Librarian. Chap. VIII.;* and *10. Reports of Standing Committees.*

Art. 4.—After "vacancies" insert *occurring in any of the offices or delegations of the Society.* The fifth "Rule of Order" to be omitted.

Chap. III., Art. 6.—Add *and in the election of officers and delegates.* Art. 7. Omit. Art. 8, *thirty* dollars for "five."

Chap. V., Art. 3.—For "at least once in every year in one or more newspapers," read *after each annual meeting, in the newspaper having the largest circulation in the County.* Insert new: Art. 5.—He shall issue to any new member desiring it, a certificate of membership signed by the President; but this certificate shall not be duplicated without the consent of the Council.

Chap. VII.—Insert new: Art. 4.—He may, with the consent of the Council, compromise the indebtedness of members in arrears to the Society.

Art. 5.—Between the words "those suspended," insert *in arrears with the Treasurer and of those.*

Chap. VIII.—Insert *by the Council* after "prescribed."

Chap. IX.—Add new: Art. 6.—Three Censors shall constitute a quorum for ordinary business.

Chap. X.—Substitute for Art. 4: *Five members shall constitute a quorum for the transaction of business.*

Chap. XII.—Omit Art. 2. Art. 4 to commence *At each meeting of the Society, the members*, etc. Add *and no member shall vote at any election until he has complied with this regulation.* Art. 8. Omit last sentence. Art. 9. Omit "at any election;" add, *A non-resident member, on returning to the County, shall become an active member on payment of the dues for the current year.*

Chap. XIII.—Substitute for Art. 2: The documents and testimonials relative to a candidate's professional and personal qualifications shall be given to the Censors, whose duty it shall be to examine all such credentials and report thereon to the Council. Upon the report thus presented, the Council shall accept or reject the candidate.

Art. 3.—For "give said candidate a certificate of membership," read *declare said candidate a member.* For "certificate is issued," read *declaration is made.*

Chap. XIV., Art. 3.—Instead of "Charges," commence *Charges* (*with specifications.*)

Chap. XV., Art. 1.—Insert between "shall meet," *be considered necessary to.* Erase "and all debts of the Society." Add new: Art. 2. The annual assessment is due at the beginning of the year for which it is voted.

Verbal alterations.—Read *Section* for "Article" wherever the latter occurs.

In Chap. I., Art. 1.—*Called* for "entitled." Art. 4, *shall* for "may;" *discretion* for "own option;" *at* for "by" the request. Art. 5, *officer* for "office."

Chap. XIII., Art. 4.—Instead of "thereafter," read *after due notification of his election.* Instead of "during the year in which it is paid," read *until the next annual meeting.*

Chap. XIV., Art. 3.—Place "in writing" after "presented," and omit after "President."

Art. 6.—For "some course of," read *some definite.*

The Article numbers to be changed to correspond with amendments above proposed.

Medical Society of the County of Kings.

59th ANNUAL MEETING, JANUARY 20th, 1880.

LIST OF NOMINATIONS FOR OFFICERS AND DELEGATES.

By-Laws, Chap. I., Art 5.—Nominations for Officers and Delegates shall be made at the December meeting. The Secretary shall have the names of all members printed on slips of paper, two of which shall be sent to each active member.

☞ In voting, use the slip as a BALLOT, after having drawn a line through the names of those nominees for whom you do NOT wish to vote.

For President.

Dr. CHARLES JEWETT.

For Vice-President.

Dr. G. W. BAKER, Dr. J. C. SHAW.

For Secretary.

Dr. WYCKOFF.

For Assistant Secretary.

Dr. J. H. HUNT, Dr. A. R. PAINE.

For Treasurer.

Dr. J. R. VANDERVEER.

For Librarian.

Dr. T. R. FRENCH, Dr. A. HASLETT,
" A. HUTCHINS, " J. WALKER.

For Censors [five in number.]

Dr. FOWLER,	Dr. PILCHER,	Dr. SEGUR,
" HARCOURT,	" ROCKWELL,	" SQUIBB,
" McLEAN,	" RUSHMORE,	" H. B. WHITE.
	" SANFORD,	

For Five Delegates to the N. Y. State Medical Society [1880-1882.]*

Dr. BARBER,	Dr. A. OTTERSON,	Dr. WALLACE,
" BYRNE,	" PILCHER,	" WATT,
" FOWLER,	" REESE,	" B. F. WESTBROOK,
" HUNT,	" SHAW,	" WIGHT.
	" SHERWELL,	

* *By-Laws Chap. XI. Art. 2.*—" Any Member elected as Delegate to the Medical Society of the State of New York, who shall be unable to act as Delegate during two successive years, shall be considered to have vacated his position as Delegate."—There are three " original " vacancies in the delegation to the State Society, by reason of an increased representation apportioned to this County ; also two vacancies for unexpired terms.

The President requests the following members to act as TELLERS:

Dr. COLTON,	Dr. GRIFFITHS,	Dr. MARTIN,
" EMERY,	" HARVEY,	" ROCHESTER.

——The Regular Monthly Meetings of the Medical Society of the County of Kings are held at 8 P. M. on the third Tuesday of each month, at Everett Hall, 398 Fulton Street.

The Annual Meeting will be held on January 20th, at which time the following business will be transacted :

Election of officers of the Society for 1880.

Report of Committee on By-Laws.

Reports of Council, Treasurer, Librarian, and Standing Committee.

——New Members.—At the December meeting the following new members were elected : W. Waterworth, M.D., Bell. H. M. C., 1878 ; B. S. Van Tile, M.D., Bell. H. M. C., 1875. The following were proposed for membership : Drs. G. H. Atkinson, 98 Pineapple St.; A. M. Burns, 136 Meserole Ave. E. D.; M. W. Barnhart, 138 Kent St., E. D.; C. L. McCann, 114 Penn St. E. D.; B. J. Adams, 26 Hanson Place, and J. B. Lung, 18 Utica Ave.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

OFFICERS AND COMMITTEES FOR 1879.

President.....J. S. Prout, M.D., 167 Clinton St.
Vice-President.....C. Jewett, M D., 310 Gates Ave.
Secretary.....R. M. Wyckoff, M.D., 532 Clinton Ave.
Assistant-Secretary.....J. H. Hunt, M.D., 419 Hart St.
Treasurer.....J. R. Vanderveer, M.D., 301 Carlton Ave.
Librarian.....T. R. French, M.D., 469 Clinton Ave.

CENSORS.

F. W. Rockwell, M.D, (Senior Censor), 6 Lafayette Ave.
G. W. Baker, M.D., 48 Bedford Ave., E. D. B. A. Segur, M D., 281 Henry St.
A. Hutchins, M.D., 796 De Kalb Ave. L. S. Pilcher, M.D., 4 Monroe St.

DELEGATES TO THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

(1878 to 1882.)

Drs. J. C. Shaw, J. D. Rushmore, R. M. Wyckoff, Drs. A. J. C. Skene, G. G. Hopkins, Drs. E. N. Chapman, F. W. Rockwell.

Chap. XI, Art, 2, of By-laws: "Any Member elected as Delegate to the Medical Society of the State of New York, who shall be unable to act as Delegate during two successive years, shall be considered to have vacated his position as Delegate."

COMMITTEES OF THE SOCIETY.

HYGIENE.

Drs. T. P. Corbally, J. Walker. W. E. Griffiths, B. Edson, A. W. Ford.

REGISTRATION.

Drs. R. W. Wyckoff, W. E. Griffiths, J. A. Jenkins, Drs. W. G. Russell, N. Matson, F. W. Rockwell. Drs. R. M. Buell, A. S. Clarke.

PUBLIC INSTRUCTION.

Drs. A. J. C. Skene, C. L. Mitchell, E. R. Squibb, J. T. Conkling, J. C. Hutchison.

PHYSICIANS' MUTUAL AID ASSOCIATION.

Drs. B. A. Segur, W. W. Reese, J. H. H. Burge, A. Hutchins, W. G. Russell.

PROCEEDINGS

OF THE

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

STATED MEETING, JANUARY 20, 1880.

CONCLUSION OF THE ADJOURNED DISCUSSION OF DR. ARMOR'S PAPER ON THE "SYMPTOMS AND SIGNS OF THE PRECURSORY STAGE OF CONSTITUTIONAL PHTHISIS," READ BEFORE THE SOCIETY, DECEMBER, 1878, AND PUBLISHED IN THE "PROCEEDINGS" FOR JANUARY AND DECEMBER, 1879.

THE INFLAMMATORY ORIGIN OF PHTHISIS.

BY S. G. ARMOR, M.D.

I shall not occupy much of the time of the Society to-night, but will merely make a few general outline remarks for the purpose of opening the debate upon points which may be interesting to gentlemen who follow me.

It is, of course, well known to all members of this Society, that at one time all varieties of pulmonary consumption were classed as "*tubercular* consumption." This classification was based upon the prevalent idea, due largely to the teachings of Louis, Andral and others, that the disease was a unity; that all pulmonary consumption depended primarily upon tubercles, and that there was no other form of pulmonary consumption than that of tubercular. Hence in the older nomenclature it is invariably spoken of as "tubercular" consumption.

In modern times, and in the more recent literature, we frequently find the phrase "pulmonary consumption" used; and we might claim in favor of this more general form of expression that it does not commit us to the theory that all pulmonary consumption is caused by tubercle.

In the paper which I had the honor to present to the Society some time since, it will be remembered that I discussed but *one* variety of this disease. I alluded only to that which depended upon a *diathesis*—a constitutional state—and was known as *true* tubercular consumption—a variety which is known to you all as that which modern pathologists describe as tubercular. It is known as a variety which is inherited, and frequently manifests itself in early life. It is a disseminated constitutional form of tubercle, and, therefore, known as true tubercle. Tubercle is the primary dominating element. In cases of consumption of that kind the ordinary nomenclature of tubercular consumption would seem to be good.

I believe as much as I ever did that there is such a constitutional form of pulmonary consumption. Some of us believe, however, that there are other forms of pulmonary consumption which can be traced to local inflammatory action. May I not state the matter stronger by saying that a large proportion of cases of the ordinary forms of pulmonary consumption can be traced to a primary inflammatory condition of the lung. My belief is more and more in that direction.

In the early part of my professional life, I was an ardent disciple of Louis and was brought up in the teachings of that school. All my prejudices were in that direction, and I believed, with the adherents of that school, that there was no form of consumption that did not depend upon tubercle; but from subsequent careful study of the disease I have been obliged to abandon that exclusive view of the subject. I now believe that a large proportion of cases of pulmonary consumption have their origin in some form of inflammatory action of the lung.

It is an interesting question as to the relative *frequency* of the different forms of constitutional, acquired, or accidental consumption.

Now of these accidental inflammatory varieties we have the so-called catarrhal form of phthisis. That is, a primary epithelial trouble, commencing in the mucous membrane and finally involving the bronchioles and air cells, then producing, as the result of a low grade of inflammatory action, a cheesy degeneration, which ultimately eventuates in destruction of lung tissue. I need not discuss the relation of this cheesy degeneration to the development of tuberculosis—a subject familiar to all—nor need I allude to the fact that it is not *all* forms of bronchitis, or pneumonitis, or pulmonary disease that result in pulmonary consumption. This indeed is largely exceptional, so that after all we must recog-

nize, as a condition precedent, inflammatory action engrafted upon a *peculiar constitution*, and that we believe to be a general degraded condition of the nutritive system. This is an important point in the discussion of the question. Thus it is frequently observed in scrofulosis; indeed in all constitutional affections depending upon mal-assimilation and bad blood. Pulmonary inflammation occurring in such constitutions is apt to lead to pulmonary consumption.

German and other observers have noticed that a large proportion of cases of the catarrhal form of inflammation eventuate in quick "galloping consumption," so called. It is believed, however, by recent observers, that we have a slow, gradual, insidious form of the disease, primarily developing itself in the cellular connective tissue of the lungs, ending in a fibroid or albuminoid degeneration of the lung tissue. This is known as *fibrous phthisis*, undoubtedly a common form of disease. It is believed by others that a large number of cases of pulmonary consumption can be traced to inflammation which commences at the periphery of the lungs—*primary pleurisy*.

I shall not attempt to discuss that question to-night, and especially in the presence of a gentleman who has thoroughly studied the subject, and who therefore knows so much more about it than I do; I allude to my distinguished *confrère*, Prof. Leaming, of New York. He has given a great deal of attention to the subject, and has contributed some valuable articles to the literature of the same. I need scarcely say to you that he has been a careful observer of this subject for many years; and he certainly ought to be a good diagnostician of diseases of the lungs and chest, for he was brought up at the feet of Dr. Cammann, whose skill as a diagnostician in diseases of the lungs is so well known to the profession. I know we shall be all glad to listen to the remarks of Dr. Leaming.

THE FIBROID VARIETY OF PHTHISIS.

BY J. R. LEAMING, M.D., *New York City.*

I thank you for your flattering invitation to be present at this discussion, even while painfully feeling my inability to fulfill the part Prof. Armor would assign me. Indeed, I ought to know more of this subject than I do, having had the opportunity of learning from Dr. Cammann by constant familiar intercourse during many years in Demilt Dispensary, at St. Luke's Hospital, and in private practice—as Prof. Armor suggests.

I am expected to confine my attention, in considering this great subject, to the fibroid variety of phthisis—its cause, its early diagnosis, its tendency to excite tubercular degeneration, and finally its prevention and removal by remedial management.

I have said, and I wish to repeat, that I believe nine-tenths of all the cases of phthisis of any form that have come under my observation have had an interpleural origin ; that is, that the first discoverable signs of pathological changes were there located.

The primary cause of interpleural pathological processes is depressed vital power, as from mental irritation and worry, from prolonged anxiety, loss of friends, miscarriage of business—of hopes of any kind, over-work, bad air, bad food, and fever-and-ague poisons.

When these conditions are present, a slight cold or increased vital depression from any other cause may result in pulmonary hyperæmia, with plastic exudation upon the pleural surfaces, which, if the cause be not removed, may remain and become organized, forming pseudo-membrane and adhesions. The local disability from thickened pleura and adhesions, constantly contracting, invites new exudations from every new hyperæmic cause of debility, until contracting bands shoot into and through the lung, and progressive fibroid phthisis is established, which may result in progressive destruction of the air sacs, or the formation of cavities from caseous degeneration.

The point of great interest is, that remedial management, early applied, certainly prevents or wipes out the commencing factors of the disease. And more, in many cases of extensive interpleural fibroid, and even in the second stage of invasion of the lung, remedial measures may arrest progress and restore the patient to health and usefulness.

Diagnosis, and especially early diagnosis, is of prime importance.

The physical signs of interpleural exudations are those which have hitherto been wrongly considered as interbronchial or interpulmonary. In order to understand these, and to appreciate their cause and locality, it is first necessary to apprehend the true character of healthy respiratory murmur—to know that it is composed of two elements : air friction of the tidal movement in the convective tubes, broncho-respiratory, and the dilatation of the true respiratory system, which contracts upon the residual air with susurrus. When inspiration takes place in ordinary respiration in health, the residual air is increased, it has been estimated, one-tenth, which, dilating forcibly the contracting true respiratory system, causes a vibrating murmur of low pitch, resembling the roar of the sea heard at a distance.

To analyze these murmurs it is necessary to fill the lungs slowly while the attentive ear is placed against the chest wall. At the beginning of

the inspiration the air friction, or broncho-respiratory murmur, will predominate and be of comparatively high pitch, but as the chest fills, the roaring, vibrating low note will increase in power, until at the end of inspiration it will be full, when if the breath be held, the epiglottis closed down so that no more air can enter, the broncho-respiratory murmur will have ceased, and the true respiratory will continue alone, and the distinctive characteristics of each be readily analyzed.

Before hearing, locating, and properly appreciating adventitious râles, it is absolutely necessary that normal respiration should be analyzed and recognized in its dual character.

The theory of air passing through the bronchi to and into the air-sacs, and thence being expelled, was accepted and taught by Laennec, and upon it was founded the doctrine of the mechanism of crepitant and subcrepitant râles.

But it will not bear investigation; for, in order to do this, the air must first be displaced which is already in the true respiratory system, in order that the inspired air may reach the air-sacs, and thus to cause the bursting of bubbles in the small tubes and vesicles.

Attentively auscultating a bladder while being blown up, will convince any one that friction murmur, caused by air entering in a body, is confined to the neck of the bladder, and so soon as the air enters the cavity it meets the resistance of the residual air, and the air particles slide in among each other causing equal distension in every direction. Much more so is this the case in the human being, where the oxygen of the residual air is attracted with force by the blood in the capillaries of the true respiratory system. Then, again, the law of diffusion of gases causes almost instant admixture of the inspired air with the residual, a fact that precludes the idea of air friction or bubble bursting in such a manner as to create crepitant or subcrepitant râles.

Another theory has been eagerly caught up as explaining the crepitant and subcrepitant râles; which is, that after the air has been expired the inner surfaces of the air-sacs and bronchioli collapse and stick together, or a new inspiration separates them again forcibly, causing the râles. But in a lung capable of performing respiration at all, the inner surfaces of the true respiratory system are constantly kept apart by the residual air. A totally collapsed lung admits no air, consequently the râles are neither inter-pulmonary nor inter-bronchial, and in the nature of physics and facts, they cannot be.

Any one who has watched a case of centric pneumonia by auscultation is aware that, notwithstanding that the rational signs of sputa, temperature, respiration and pulse are all present, there will yet be no râles nor bronchial breathing until the inflammation reaches the pleural sur-

face, which may not be until the fifth day of the pneumonia, when all at once all the physical signs will be developed—râles, bronchial breathing, etc. Repeated and careful experience proves beyond cavil that crepitant and sub-crepitant râles, watched during life, have been demonstrated, by post mortem examinations, to have been heard over the site of interpleural pathological processes.

At the House of Rest for Consumptives, the late Dr. H. M. Sprague, in forty post-mortems, demonstrated the connection between râles and interpleural pathology. I have seen many cases equally convincing at St. Luke's Hospital and in private practice But, perhaps, none more so than during the last summer. The United States Commission for suppressing or tramping out the "pleuro-pneumonia contagion" among cattle, invited me, among others, to be present at the examination and and destruction of condemned cows at the foot of 38th Street and Hudson River, New York. Among nineteen there were three cows examined by auscultation and percussion, and the locality of râles noted, and post-mortem examinations were immediately afterward made. In these three cows the pleuro-pneumonia was confined to one lung; in each one the lung was consolidated throughout, so that no air could enter, yet there were râles, which in every instance were over the site of adhesions, and where there were no adhesions there were no râles.

At different dates in August four other cows were examined before their destruction, and afterward post-mortems made, and in every one these facts were demonstrated. The last one was of especial interest. The right side was dull under percussion everywhere. There was bronchial breathing over the centre of the lung, but no râles, except over the shoulder and over the diaphragm. Post-mortem showed consolidated lung, except a portion of the depending part, which was œdematous. The true respiratory system of this part was filled with glutinous fluid. There were adhesions at the summit of the lung and at the base, where the râles were heard, and there were none elsewhere. There was some fluid in the pleural cavity.

Over the left side there was a moist quality of the respiratory murmur (the cow had feeble non-respiratory murmur) which muffled it. Listening attentively, an occasional soft, moist, distinct râle could be heard. The diagnosis was hyperæmia of the lung, plastic exudation in the pleura, and commencing fibrination.

The post-mortem showed the pleural surfaces bathed with their adhesive exudation, and occasionally Prof. Law could raise, with the point of his knife, radiating fibres of beginning organization.

There was no pneumonitis, no pleuritis, and the hyperæmia was relieved by the bleeding. More positive and direct evidence of the inter-

pleural origin of râles of the crepitant and subcrepitant varieties, as well as of the priority of inter-pleural processes could not be desired than was present in the case of this cow.

Niemeyer noted that, in clinical experience, many of the patients with phthisis dated their illness from a cold. Such has been my own experience. In many of the cases hemoptysis occurred from two to eight weeks after a cold or bronchitis, so called, or pneumonia, and in all cases interpleural râles or restricted movement in respiration were present.

Organized exudation or fibroid within the pleuræ, at once interferes with the peripheral capillary circulation of the lungs, and as the nutrient arteries have no accompanying veins, the blood is thrown back upon the bronchial arteries from which they are derived, and bronchorrosa or bronchitis is the result, and is called catarrhal phthisis by Niemeyer, who says in effect, that the danger of its becoming tubercular (to which I agree), is imminent.

Should there be no tubercular tendency, progressive fibrination may extend into or through the lung until the function of the true respiratory system is destroyed. Pure fibroid phthisis is rare, but not more so than pure tubercular. The great majority of cases are mixed. I have heretofore endeavored to classify phthisis and to show the relative frequency of the different varieties as based upon my own experience,* and also the obvious connection between the initiative of fibrination within the pleuræ and in the lung and tubercular degeneration. The post-mortem examinations of the cows furnished decided evidence of this fact. Prof. Law informed me that he had also noticed it.

The practical advantage of the early diagnosis of interpleural processes which may lead to phthisis of either the tubercular or fibroid variety is its perfect curability by simple management, systematic and gentle expansion, by filling the lungs moderately and then holding the breath—the expansive force of the inspired air becoming rarefied by heat in mixing with the residual air being the efficient factor. Milk diet in large amount, so that the blood-vessels may be distended and nutrition carried to every part, with thorough and repeated application of spirits of turpentine over the region of the pathological signs, with removal of depressing conditions, will speedily cause to disappear all evidence of disease, which if left to the remedial efforts of nature, might result in one of the forms of pulmonary phthisis.

*Archives of Med.

THE STARTING POINT OF PHTHISIS.

BY E. N. CHAPMAN, M.D.

I have been very much interested in the remarks of Professor Leaming, particularly as he recognizes a stage in pulmonary consumption preceding the deposit of tubercles in the lungs. Being, however, by a defect in my hearing, shut out from those lighter sounds so familiar to specialists, I can offer nothing in regard to the preliminary stage of tuberculosis, drawn from auscultation and percussion. This matter I leave to others.

But it appears to me—an opinion I have long entertained—that consumption is something more than the mere deposition of tubercles in the lungs, as seems to be, more or less, the general opinion. The starting point is far back of the lungs. At first they are intact, and continue so until, by the deterioration of the health from defective digestion and assimilation, the blood becomes loaded with devitalized products, and then they become the centre of morbid action. The lungs offer a place for the local manifestation of a series of disorders implicating the whole system. Most local disorders can be traced to a faulty nutrition, or to causes which depress the vital resistance. Disease comes from within, and not from without. One person, from a slight exposure, will contract a pneumonia, whereas others, under the same conditions, will not experience the slightest inconvenience. Pneumonia, like many other diseases, occurs in persons whose nutritive functions are oppressed, and whose nervous energies are exhausted.

Children that are not allowed to play in the open air, but are shut up in houses darkened by blinds or shades, and crammed with animal food to restore their waning strength, are on the way to consumption, or some other disease that waits on mal-assimilation. The health running down still lower, nutrients are pushed with greater assiduity, and pepsin given to promote the digestion. To these iron and cod-liver oil are added, to enrich the blood and brace the nerves. No better way could be devised to insure the formation of tubercles in the lungs, or to excite the softening of any already present. Such a course overburdens the digestive organs and impairs the nutritive functions—just the condition in which tuberculosis is developed. The result is pretty certain, whether a person inherits a tendency to consumption or not. If the statement of Dr. Sizer is correct, that two out of seven of all deaths are from tuberculosis, we certainly have not improved much of late years in the

matter of treatment. Perhaps the use of animal food, cod-liver oil and tonics when the stomach is clogged, and the circulation loaded with poorly elaborated chyle, does more harm than good, and precipitates fatal degeneration of the lungs.

As to the precursory signs of tuberculosis, I think this discussion has been too much restricted to those derived from auscultation and percussion. In my experience, where a patient is developing a tubercular cachexia, he eats with less relish, becomes nervous, has a sunken countenance, a pearly color of the sclerotic coat of the eye, a quick, piercing look, loses flesh steadily without apparent cause, and gets no refreshing sleep. Besides, there is another symptom—one that should always excite alarm—the pulse is sharp and rapid, sometimes running up to 90 or 100 pulsations per minute.

The children in America are universally reared in a way to insure a low tone of the health and lead to a degenerative disease like tuberculosis. indeed, the nation is more than decimated by this scourge. Nitrogenized food, condiments, pastry, deficient exercise, dark rooms, foul exhalations and nervous strain are working silently but surely to the destruction of the coming generation. The first blow is struck at the digestive organs. Every now and then there are gastric attacks, attended with vomiting and diarrhœa, and sometimes with fever of shorter or longer duration. After a few days of low diet these attacks terminate with slimy passages, showing that the mucous membrane of the stomach and bowels had been congested, if not subacutely inflamed. The constant relighting of this condition by improper food at length disturbs the equilibrium of the sympathetic nervous system, and disorders all the nutritive functions. Now, not only is the blood loaded with materials unfit for the renewal of the tissues, but the agent by which the new is appropriated and the old cast off is shorn of its power. How can the young fail to develop the tubercular diathesis?

It is well known that cows, kept in large numbers in one inclosure, standing in their filth, breathing foul air, deprived of exercise, air and sunlight, and filled with heating food, become almost universally tubercular. Examinations after death have proved the fact beyond question. Why will not the same result follow the like treatment of our children?

That, in the case of children fed improperly, the gastric mucous membrane is in a state of constant irritation is shown by the experiments of Beaumot on St Martin. Whenever his stomach was overtaxed by the quantity or quality of the food, or overstimulated by spices and alcohol, its mucous coat became inflamed, and covered with pustules and aphthous patches.

Such being the condition of the gastro-intestinal mucous membrane in the young, the system is open to any low form of inflammation—

that of the lungs or pleura more especially. Nevertheless, as the disease started in the digestive organs, I would not direct my treatment to the chest. The lung trouble is secondary. Many years since, acting on the inflammatory theory of tuberculosis, I pushed antiphlogistics with becoming vigor, applying externally croton oil and blisters, and giving internally tartar emetics, ipecacuanha, senega, liquor potassæ and iodide of potassium. I am certain that the practice is wholly bad.

The plan, as I am fully convinced, is to begin with the digestive organs; and, first of all, place them in good working order. To do this, we must select a food containing all the elements of nutrition, unstimulating in its nature and fitted to relieve the irritation of the stomach and bowels. To aid the diet in restoring the digestion and assimilation, air, exercise, sunlight, mental occupation must be looked to, and everything else done that will promote the general health. Do not ply the patient with meat, cod-liver oil, the phosphates, pepsin, and the many panaceas that hurry thousands to untimely graves. The stomach is broken down, and is unfitted to bear new burdens.

Milk, with lime-water, fulfills all the indications, and will both nourish the patient and relieve the congestion of the gastro-intestinal surfaces. Gradually, farinaceous food and vegetable acids may be added; but meat, in any shape, should not be allowed until the digestion is perfect and the movements natural. Even now it should be restricted to the midday meal, and consist mainly of beef and mutton.

To tell what is the state of the digestion tube, the passages must be closely observed. The information thus gained is equal to, if not greater, than that from examination of the urine. In either case a neglect on this point deprives us of valuable help in practice.

The stomach being in order, the movements natural, the appetite good, and the nerves in equilibrium, various tonics, even cod-liver oil and the phosphates, may be used with advantage. Now they can exert their full influence. Since using the milk diet I have had four cases in which pulmonary consumption seemed imminent. In two there was local dullness on percussion; in one, dullness and prolonged expiration, and in one great prostration and rapid pulse, with no pulmonary signs. The third case, Dr. Colton diagnosed tubercles, and in the fourth Professor Flint thought the disease impending. Nevertheless, under the plan of treatment sketched above, these four persons are now in prime health.

EVIDENCE OF TUBERCLE.

BY J. M. HARCOURT, M.D.

I consider this a very interesting question; we are brought in daily contact with this disease; we see it select its victims from amongst the wealthy and intelligent classes as well as from the poverty-stricken family of the squatter.

After the most zealous care has been bestowed on a case; after the most approved treatment, we see our patients gradually lose flesh, lose strength, lose everything except hope, and it seems a peculiarity of this disease, that it haunts its victims with delusive hopes even to the last. About two thousand years ago, Horace wrote:

> "Pallida mors æquo pulsat pede pauperum tabernas
> Regumque turres."

With a slight modification, these lines of the Latin poet would make a very good heading to a chapter on phthisis.

Any one who will add to our information relative to this disease, is sure to meet with a cordial reception from the profession. I know it is not easy to bring forward a theory that will suit every case; but I think, after consulting some of the many good works on Pathology and the Etiology of Phthisis, and after devoting some original thinking to the subject, it may be possible to form a theory that will embrace all the strong points of the best modern writers. Of course, we are not to expect that such a theory would be perfect by any means, but we must remember that the different theories on the origin of light, electricity and many other departments of physical science are not rigorously exact.

Rokitansky has told us the order in which the various organs are invaded by tubercle, commencing with the lungs, the lymphatic glands, the intestines, the mucous membranes, the brain, and ending with the uterus and testes. He also reminds us that the apex of the lung, the pia mater, the base of the brain, and so on, ending with the fallopian tubes, are the usual sites for tubercular deposit.

With regard to the histology of the disease, there are many very interesting things that might be mentioned, but that Dr. Sizer has so ably covered this phase of the question.

There are a few points in Dr. Shaw's paper to which I wish to direct your attention.

You will be good enough to remember that Dr. Shaw's first case was one of pulmonary tuberculosis, accompanied by symptoms of brain dis-

ease. The doctor says there was evidently no tubercular disease of the brain at this time. This is a point I don't see clearly. I think the most obvious explanation of the brain symptoms is to consider them the direct result of a tubercular deposit in the brain. We know the brain may be the primary seat of tubercular deposit, or it may be invaded at the same time with the lungs; otherwise the doctor will have to answer the question: How long after the lungs are invaded is it before the brain becomes the seat of deposit? Now, it is manifestly impossible to answer this question. So is it impossible to say with any degree of certainty that the brain in this case was not the seat of tubercular disease. I think it reasonable to suppose there were tubercles in the brain of a subject whose lungs were crowded with them. I think this the more obvious and rational explanation of the brain symptoms, than to look on them as the result of an abstracted pulmonary circulation.

Dr. Shaw's second case is that of a child becoming suddenly hemaplegic without previous symptoms. In this case, the Doctor says: We have to admit there may be formed tubercles on the pia mater and cerebral vessels and remain in what we ordinarily speak of as a latent condition. Here we have a case of brain disease, the result of tubercles in that organ, although none are observed in any other part of the system; from this case, we have strong grounds to believe the presence of tubercles in the brain in the first where the system was saturated with tubercular deposit.

The third case is one where intermittent symptoms accompanied tubercular disease, and the doctor speaks of the possibility of intelligent physicians being misled in believing they had a case of intermittent fever to deal with. I don't see that these physicians would be wrong in such a case. Whenever I see a disease take on a periodic character, or complicated with a periodic disease, I always suspect the presence of malaria.

The doctor rejects the idea of malaria. I don't see why he does. He replies that such intermittent symptoms are not infrequently seen with tubercular disease. Granted; but he has still to disprove the presence of malaria.

I would remark that periodicity is not one of the characteristics of tuberculosis, except in the presence of malaria; then the doctor's case is supposed to be in a malarious district. I think we may safely admit the explanation that I suggest without doing violence to any pathological dogma.

But Dr. Shaw is a specialist and specialists are hard men to get along with sometimes; th won't accept what appears the manifest interpretation of certain symptoms, but go to work and get up an ingenious theory to enable them to explain those symptoms from their special standpoint.

There is another case in his paper in connection with inflammation of the middle ear.

He says, "When you remove the cranium and dura, you find that there is purulent inflammation of the pia especially, and sometimes at the base of the brain; you examine the dura covering the temporal bone, and you find that it is perfect;" the doctor sees no holes or openings and seems puzzled to know how this matter gets there. Now, it is well known that if we place a diaphragm between two liquids of different densities in a vessel, they pass through easily and form a sort of combination afterwards; no holes or rents are found in the diaphragm. The doctor in this case seems to believe that the product of inflammation infiltrates its way through the bone, rather than pass through the dura mater, for the simple reason, it would appear, that he is unable to find signs of it having passed through the dura; overlooking the common laws of endosmosis, etc.

In making the foregoing remarks, I don't desire to be thought as showing any unkind feeling towards Dr. Shaw; on the contrary, I consider his paper, as well as all the others, a very able one. There seems a tone of originality running through it, and although his explanations may not be satisfactory to me, yet I always wish to give credit to a gentleman who attempts to give an original solution to a difficult problem.

COLORADO AS A PHTHISIS SANITARIUM.

BY J. HAWES, M.D., *Greeley, Colorado.*

I came here to listen, not to speak; but, on request, will make some remarks upon the question before you, and Prof. Armor gave me the key to what I shall say, by asking me "what class of cases should be sent to Colorado."

The rule is that those cases which are of non-tubercular origin should be sent there, but there seem, nevertheless to be very many exceptions to the rule, for I have found quite a large number of tubercular origin who have been sent from the East to that asylum for consumptives, probably because it is more accessible than California, and perhaps it has some advantages over other parts of the United States; but these are exceptions to the rule.

Perhaps I can make my meaning clearer by the relation of one or two cases.

I have vividly, to-night, brought up to my mind a case with an extremely bad history. She was a member of a very tuberculous family. Every one of that family, consisting of eight or nine ladies, had died before thirty, except one, and that one before forty; and she was arriving at the age of about thirty, when she began to lose her appetite, to cough and fail in strength, and in this condition came to Colorado. On examination of the chest we found it was impossible for her to take in as much air as she ought or wished, that vocal fremitus on the right side was much more marked than was the normal difference between the right and left side. Percussion gave more than the normal amount of dullness. Auscultation discovered râles peculiar to an irritated nervous membrane; and, under the circumstances, I could only believe that she would follow the usual course of the rest of her family.

She remained without material improvement for several weeks. Imperceptibly her cough left her and during a period of two years I saw her almost daily, and during that time she had gained over twenty pounds. She ate heartily, having previously seldom taken a morning meal; now she took three good meals a day, slept well, and after about eight months had no cough and had never caught cold; previous to that time, on the slightest exposure, she had been liable to "catch cold," as the expression is. To-day she is one of the most healthy women that can be found.

Another case was that of a young man with whom I was quite intimately acquainted, a very intelligent member of the legal profession in the city of St. Louis. He had a bad family history and was compelled to leave his profession, and by many of his friends, it was believed that he had gone West to die. He went to Colorado, and at the end of one and one half years was as sound and hard almost as a bullet, and for the last two or three years has been pursuing his profession with all the health that any one could ask for.

I do not wish to detain the Society in the relation of individual cases; but merely speak of these as an illustration that there are many departures from the rule as stated; that while, as a general thing, those who get well are of a non-tuberculous character, yet there are many deviations from the rule. But were I a resident of this part of the United States, and a friend or relative of mine was in a pre-tubercular condition, or in a precarious condition as far as the lungs are concerned, and was not improving satisfactorily, I would send him there unless I desired to send him, for some particular reason to some other health resort.

THE PRE-TUBERCULAR STAGE OF PHTHISIS.

BY J. A. McCORKLE, M.D.

I would like to call attention to one or two points in connection with the *pre-tubercular* stage of consumption. I have studied it with some care, and have been somewhat disappointed in that study.

Dr. Armor has omitted, in his very admirable paper, to notice one or two points. Dr. Allcock, several years ago, in the "Army Medical Reports," calls attention to one symptom of the pre-tubercular stage which has not yet been mentioned, and that is a fall of temperature. He says that, in numerous observations of persons giving a history of the pre-tubercular stage, he has noticed that there is often a fall in temperature of from one-half to one degree. I have also observed it in a few instances, but they do not furnish data sufficient to form a satisfactory conclusion. May it not be true that this symptom is present? Here we have an organism, invaded by a terrible disease, where all the functions of the body are more or less subverted or deranged. It would seem strange if this observation of Dr. Allcock's did not hold good in a certain degree.

Again, the Doctor makes no mention of an instrument, invented by Hutchinson, of London, which is known as the "Spirometer," for the purpose of measuring the cubic capacity of the lungs. I know that an argument may be brought against it, that by exercise, use, or by a frequent repetition, a person may be able to empty his lungs more perfectly; but all persons are not gymnasts, nor are they enthusiasts on this subject of chest expansion; so with a great majority of patients it may serve a useful purpose.

Another point, which I have observed in my dispensary practice, is a congestion of the pharyngeal walls, in connection with lung diseases. Whenever I find this condition in dispensary patients, associated with dyspeptic symptoms, I am always led to examine the lungs, and in many instances I have found evidences of deposits. I have followed this practice five or six years, with good results.

Allow me to take exception to one statement made by the Doctor, in his paper, that being in regard to physical signs. I was somewhat familiar with his views on this subject before he read his paper, and I must say that I do not attach much value to physical signs in the pre-tubercular stages of consumption; for when the patient reaches the stage when physical signs are manifest, they are not in the pre-tubercular stage

—they are in *the tubercular stage itself*—for you know very well that we may often have quite extensive changes, and even small cavities, in the lungs, without there being any physical evidences of their presence.

In regard to scrofulosis, I desire to say only a few words. I read an article, a few days ago, written by Dr. Weber, a medical officer in the Austrian army, who, in referring to the Slavonians, says that a great many of the people suffer from this malady, it being more prevalent than any other constitutional disease. These people live under the most unsanitary conditions—their houses being badly ventilated, and their food unwholesome, and having no idea of personal cleanliness. They live in just that condition which is supposed to be most conducive to consumption, *and yet consumption is, among them, one of the rarest of diseases.* Now, are scrofulosis and tuberculosis twin sisters—or what? A few words in regard to the treatment of tuberculosis, and especially in connection with hopeless cases of consumption. All that has been said to-night has been based upon the idea that recovery was possible. There is a time, in the course of this disease, when there is little or no hope, and there are certain symptoms which we must treat. It is not always the province of the physician to cure; in fact, it is only rarely that he can cure. He must treat symptoms—especially the chill, hectic fever and sweating. We are now using large amounts of quinine in fevers; with some of us it is almost a monomania.

I want to enter my protest against the use of that remedy here. It does no good; in fact, does harm.

For these symptoms I have found nothing to equal arsenic. It is the remedy above all others. In my out-door department, I have a large number of consumptive patients; and when I find the conditions spoken of, I put them on small doses of arsenic, keeping, of course, within the irritant point, and in that way meet the indications. For if we stop the morning shivering, we lessen the hectic, and by so doing, we decrease the sweating—through the night-sweats our patient losing a large amount of the salts of the blood.

The cough is another symptom which is very troublesome at this stage, and should be treated. When I first entered upon my hospital duties, I tried almost everything for the relief of this symptom, using expectorants of all kinds freely. Almost every consumptive patient takes some kind of a cough mixture. They are generally nauseating in the extreme, and would make a well man sick, and a sick man worse. I now use small and frequently repeated doses of opium, in pellets of one-eighth or one-tenth grain each. One given every hour will generally relieve this troublesome symptom, and by bedtime enable the patient to secure a quiet and refreshing sleep. The opium does not give

sleep; it relieves the cough of the consumptive, and lets him sleep. By doing this, you meet two indications—in the first place, you get *rest* at once, refreshing and restorative; and in the second place obtain the sustaining effect of small doses of opium. You get a beneficial effect also upon the pulse of hectic. You are all familiar with the pulse of a consumptive patient—its quick and irritable action. After the administration of opium the pulse wave becomes longer and softer, more like the normal. In other words, the opium gives the heart rest, steadies its action, keeps it within the fatigue point—an essential indication in this as in other diseases where the tendency to death is by asthenia. Not only that, but your patients, with the cough quieted, will be more free from nausea and vomiting, a very frequent source of annoyance at this stage of the disease. Opium becomes an appetizer by taking away the various conditions upon which anorexy depends. Our patient now has a desire for food. What kind of food shall we give? Why, what Dr. Chapman has recommended. Milk or some of the good things that can be made from it. What will be the result? The food which he can now take will be relished, and he will assimilate—and it will do more. The opium having quieted the cough, the milk and other food will keep the gastric branch of the pneumo-gastric nerve out of mischief; for very often, much of the cough depends upon reflex irritation. With the good old Rum punch in the morning to lessen the fatigue of the morning cough and the effort of dressing, and with a nap in the afternoon, to break the long weary day, is about all we can do for the sufferer. His last days will be made more comfortable; for if we cannot bring our patients to live on the higher plane of perfect health, we must be content to let them live on the lower one of comparative comfort.

THE PROLONGED EXPIRATORY MURMUR.

BY B. F. WESTBROOK, M.D.

So much has been said to-night that one does not know just where to begin; but probably the best way to break that embarrassment is to begin at the beginning, and more especially, because in all the papers read here no gentleman, with the exception of Dr. Sherwell, and possibly Dr. Skene, has entered into any discussion of Prof. Armor's original essay.

The throat complications which Dr. Armor mentions, have been sufficiently discussed by Dr. Sherwell, so that it will be entirely unnecessary for me to say anything on that subject.

With regard to the early epistaxis which he mentions as one of the precursory signs of tubercular phthisis, I must say that I have been unable to observe it.

Since I got the idea from Kunze's book, a year or two ago, I have gone patiently over the subject, but I am unable to make a diagnosis between catarrhal and tubercular phthisis, and that may have led me into difficulties. I have questioned all my phthisical patients upon this point, and it seems to me that epistaxis is conspicuous by its absence ; but that may be due to a limited observation.

In regard to physical signs, while I would not be willing to go as far as Dr. Armor does in designating physical signs for the precursory stage of phthisis, I admit more than Dr. McCorkle does when he says that we cannot have any physical signs in the lungs unless there is pre-existing disease of the lungs. We may have a peculiar formation of the chest ; there may be diminished expansion of the same and a weak respiratory murmur—I think all these may be present without the presence of any physical disease in the pulmonary tissue. However, I do not think that theory can be considered exactly as indicative of the primary stage of phthisis—*i. e.*, as indicative of the immediate advent of phthisis. Patients who bear these marks on their chest have *carried them through life* in most cases. There are cases of *family* phthisis where the influence of heredity comes into play. They were abnormally developed —never had good chests for the free expansion of the lungs, or a good expiratory murmur. They may, at any given time, be in such a condition that they either may or may not have phthisis, as remarked by Dr. Chapman.

In regard to the prolonged expiration which Dr. Armor speaks of, I would say it is a sign which has attracted my attention to a considerable extent. I think it may be due to one of two circumstances. In the first place, I think we may have a prolonged expiration, or rather a *prolonged expiratory murmur*, from anæmia of the lung ; and in the second place, this may result from a deposit in the lung. I exclude emphysema and chronic bronchitis, which of course do not enter into the question. Anæmia of the lungs, I presume, might form a part of the general anæmia of the body, and in this case the mechanism of the production of the prolonged expiratory murmur is as follows, I think : The lung is a very vascular organ. Whoever shall inject the vessels of a lung and then examine it microscopically, will be convinced of this, for the amount of blood circulating in the capillaries is very much lessened ;

and in order to fill out the spaces, air passes into the cells, dilating them, and producing what might be called a cellular or compensatory emphysema. This vesicular murmur, both compensatory and expiratory, is then heard more distinctly than in health.

The reason I do not think that it is due to loss of elasticity of the lung, as Dr. Armor has suggested, is that we know that *normally* the expiratory phase of respiration is a little longer than the inspiratory. The only reason why we do not get a longer expiratory murmur is that it is weak compared with the inspiratory murmur. It is simply a passive phenomenon, due to the elastic contractility of the lung and the relaxing walls ; the sound is not sufficiently loud to be conveyed distinctly to the ear. But, if the walls are thin and more air is passing into and out of the vesicules, we then get a louder sound, and a more ready conveyance of the sound to the ear. In that case we get a distinct expiratory murmur. On the contrary, if the lung is partially solid from phthisical deposits, the sounds are simply conveyed by the solid matter, as a better conductor of sound directly to the ear, and in that case we also get an increased expiratory murmur.

To support this view I refer to the investigations of Marey and others who have used the graphic method. Prof. Riegel, of Würzburg, states that the expiration is a little longer than the inspiration. He has also recently shown that in phthisis inspiration and expiration are of about equal length. There is not the prolongation of expiration which has been described. There is only the expiratory sound transmitted more clearly to the ear. And this is why I think it may be difficult to determine whether prolonged expirations were due to anæmia or to a partial solidification of pulmonary tissue. So that prolonged expiration is not of much value as a sign of phthisis, unless accompanied by dullness on percussion and elevation of pitch ; and when these are present, the precursory stage has gone by.

The doctor further has divided phthisis into three varieties, namely : catarrhal, fibrous and tubercular, which division he characterizes as one of the greatest triumphs of the modern medical world (I cannot quote the exact words), and this evening he has stated this view in a modified form.

Some of the gentlemen present may remember that before Dr. Armor read his original paper, Dr. Kretzschmar read a paper in which he adopted this division from the German authors ; and those who have a good memory may recall that I then took occasion to express my dissent. I can only say now, what I said then, that, in practice, I have been unable to make the distinction ; and I must say that it is my belief that this fine distinction cannot be drawn during life. I do not believe that

phthisis originates from ordinary inflammation of the lungs, unless it may be in what is known as phthisis Florida, or acute galloping consumption.

Post mortem, the appearances are very confusing, and in no two cases are they exactly alike. I find fibrous contraction, cheesy pneumonia and miliary tubercle, all these varieties, but freqently in the same lung, and mingled in ever varying proportions, and it seems strange that during life such sharp lines of disease should be drawn where, post-mortem, the appearances are so distracting. The only way to settle this question is to let all the doctors bring their cases here, or to some other convenient place ; let them be pronounced upon by some undoubted authority ; and then compare post-mortem appearances as far as may be.

At present I am rather skeptical. I think, also, that the majority of pathologists of the present day—that is, those who write in this line—are going back to a modification of the old view, and that the doctrine of the trinity of phthisis is being abandoned to a considerable extent. It is now held by many that there is a peculiar lesion of the lungs, called desquamative pneumonia by Buhl, which consists of an infiltration of the connection tissue of the lung. This infiltration, or inflammatory product, whatever you may choose to denominate it, resembles, to some extent, adenoid tissue, and is called lymph adenoma by Wagner, and so closely does it resemble adenoid tissue, and so closely does ordinary tubercular tissue resemble it, that it requires a very expert microscopist to distinguish between them. In fact, it is a question whether it is not adenoid tissue, and whether phthisis and scrofula are not diseases of the lymphatic structures. In the first place, Buhl, in 1872, published his work on consumption, in which he advanced the idea of the unity of phthisis, on the ground of desquamative pneumonia. Later on, this view was adopted by various authors. Prof. Rühle, a distinguished writer in Ziemssen's Cyclopædia has adopted this view. Friedländer has essentially adopted it. Rindfleisch, in the same Cyclopædia, has written an article in which he denominates it tubercular inflammation, and calls all kinds of phthisis, except miliary tuberculous, by this name. The French school have always maintained it, and Charcôt and his followers have recently published interesting contributions upon this subject. Last year Dr. T. H. Greene, of London, the author of one of the best little works that we have on pathological anatomy, has published a small volume on phthisis, in which he takes the same view. Dr. Greene probably puts the matter in the best light for English readers. His view is, that we have in the lungs the desquamative pneumonia of Buhl ; we have, also, a fibroid degeneration, so-called ; the cirrhosis of Corrigan; miliary tubercle ; and probably in the majority of cases we have them all mixed up together in the same lung.

Now, with all this conglomeration post mortem, it will be difficult to decide, ante mortem, the exact condition of affairs ; and it can only be done as suggested, namely let some authority diagnose cases and then compare post-mortem appearances.

Now, if Dr. Leaming will permit me, I would like to notice his observations. I will be brief, because the views of Dr. Leaming are almost entirely new to me and consequently, for the moment, I can scarcely frame a correct opinion in regard to them.

He says, that in order to distinguish between the broncho respiratory murmur and the respiratory murmur produced in the air vesicles, the patient should be instructed to take a deep inspiration, then close the epiglottis, and then continue in that state for a time. I may not have quoted him exactly, but I ask for information.

In regard to some other points, as for instance, the starting of phthisical trouble in the pleura, the diagnosis between pleural signs and intra-pulmonary signs, it seems to me at first sight that these views can hardly be maintained, for we have many cases of phthisis where there is little or no adhesion of the pleura. We have every now and then lungs where there are no adhesions to the pleura. In these cases we have ordinary râles in the lungs. I can hardly see how the Doctor will explain the production of râles, for instance, sub-crepitant râles with bronchitis, how he is to diagnosticate these from the râles which we have after slight pleuritis, which sometimes simulate these sub-crepital râles closely. Nor do I see why he denies that we shall have sub-crepital râles in inflammation of the lungs. I think that in *post mortem* we find fluid in the bronchial tubes ; and it is difficult to see how that may not produce râles. If it did produce râles, it is difficult to see how the doctor made a diagnosis in the cases related. I was also somewhat surprised by the doctor's pathology of pleurisy as being a simple exudation upon the surface of the pleura, through the vessels of the lung, as I understand the generally accepted view, inflammation of serous membranes is accompanied by a rapid proliferation of the endothelium which covers the surface of the membrane ; and we have abundant proofs of what the lesions are in these inflammations of serous membranes, a rapid and abundant proliferation of endothelium, with formation of leucocytes and exudation of plasma and blood corpuscles. The chronic pleurisy which we get with phthisis, I have always considered as a secondary affection, being consecutive to the inflammation of the pulmonary tissue.

THE RESPIRATORY MURMUR.

BY J. R. LEAMING, M.D.

Dr. Westbrook says my views in regard to respiratory murmur "are almost entirely new" to him. They may be found in *The New York Medical Journal,* May, 1872. Also, and more correctly stated, in "The Transactions of the New York Academy of Medicine," Second Series, Vol. I., p. 129.

The dual composition of the respiratory murmur in man in a state of health, has been practically recognized by many observers.

"Puerile respiration," describing an abnormal sign in an adult, has reference to the fact that true respiratory murmur is absent in a child.

Healthful respiratory murmur in an adult is when the broncho and true respiratory murmurs have each their proper proportion. Writers have described this perfect murmur as "vesicular," "broncho-vesicular," and "pure respiration."

I have attempted to analyze and measure the constituent parts of healthful, normal respiratory murmur, believing that in so doing we obtain a method of delicate and accurate diagnosis of immense importance in determining the earliest evidence of commencing disease. "As, for instance," in answering Dr. Westbrook's second question, "the starting of phthisical trouble in the pleura, the diagnosis between pleural signs and intrapulmonary signs?"

The accurate analysis of the respiratory murmurs makes it easy to determine by the ear the locality of the formation of râles, as was proved by the autopsies of the cows, as related. In consolidated lung, air cannot enter, and there is consequently no movement of air even in the larger bronchi, which remain patulous. This is confirmatory of the fact that râles are heard over the site of adhesions which are recognized by the ear as being directly connected with the chest wall. So that in consolidated lung the proof is positive that râles cannot be interpulmonary or interbronchial.

Tidal air enters the bronchi as far as the fourth division, where it meets the residual air, and is immediately mixed with it, according to the law of diffusion of gases. Consequently, should there be fluid in the bronchioli and air sacs, it could not be moved along so as to form bursting bubbles. This, again, is confirmatory of the fact that the ear recognizes the direct connection of the râles with the chest wall—that is, that they are interpleural and not interpulmonary. In the case of

œdema of the lung in the cow, as mentioned, there were no râles, except over the site of adhesions which were far removed from the site of the œdema.

Dr. Westbrook says, "we have many cases of phthisis where there is little or no adhesion of the pleura," etc. My experience is directly opposite to this. Phthisis without adhesions I have rarely found. In the very few cases which I have seen, there were no râles. Louis describes latent phthisis in which there were no râles, or only such as were developed near the close of life by extension of the disease to the pleura, and in these only fresh adhesions were found by post-mortem.

Interpleural plastic exudation with adhesions may be the result of two differing pathological processes:

One, the result of pleuritis, the serous membrane being primarily affected, or directly by irritation, as secondarily to tubercular phthisis.

The other, much more frequently met with, which is the result of lowered vitality and local hyperæmia, causing plastic exudation, which immediately, or very soon, commences to organize, forming pseudo membrane or adhesions.

This variety of interpleural disease, which may be the beginning of phthisis, is readily remediable simply by constant expansion of the chest by systematically breathing in a little more air, and holding it a little longer than ordinarily, with strictly milk diet in full quantity.

THE FINAL CAUSE OF PHTHISIS.

BY J. S. WIGHT, M.D.

When I read in our works on pathology and when I hear similar sentiments from our clinical lecturers and those who have looked into the matter, when I look upon the gross appearances of these tubercular cases, then read in books on pathology and hear our clinical teachers say that the final appearances are so and so, I look back to the connective tissue, to the general connective tissue of the body. There is not only this nucleus of proliferation here, but there may be at times some vascularity around it. This zone of vascularity I am willing to call inflammation—that Demon Terrible—but that is not what we are talking about. It is proliferation which lies at the bottom and is the foundation of this new process, and in this tissue there is sooner or later an-

other zone of structure that may be fibrine, that may be simply cellular; but when we find that in addition to this there is a breaking down of the tissue, a fatty degeneration or destruction, I begin to think that we have here an excellent illustration of the same process which is going on in a gummy tumor. In that, we have an irritation that we know something about, that it comes from syphilis and that touches, in my judgment, the very heart of this pre-tubercular question. We have an outset here of irritation, something which does not produce what we denominate "inflammation," something that is a little different from that. We find, upon examination, that in the lining tissue, in this connective tissue, we find this very fault of proliferation. That touches at the bottom of this proliferate which must come from some irritation. We must look back to the source of the irritation and not take up one of the concomitant symptoms as a cause of the disease. We must consider the food we eat, the air we breathe, the soil we live on, the house we inhabit, and hereditary tendencies. The problem is a vast one, the field is large, but in order to solve it we must take into consideration all the departments of the problem.

When I was a student I had an opportunity to examine cows which had died after having been confined in close and unhealthy stables. We found not only the lungs and the pleura but the liver and spleen and, in fact, all the abdominal organs filled with tubercular masses; now I do not suppose that an inflamed pleura had anything to do with causing tubercles in these cows.

And I do not regard it as sound reasoning, to conclude that tubercles are caused in rabbits by the scratch of a pin, when we find tubercles in a great many rabbits, and monkeys and other animals which have never been scratched by a pin.

INFLUENCE OF ALTITUDES ON CONSUMPTIVES.

BY P. H. KRETZSCHMAR.

It was my intention to say a few words about the influence of altitudes on consumptives; and, also, to quote more extensively German authors on the subject of "Brehmer's method of Treating Phthisical Patients." The lateness of the hour will not permit me to do so. Since I wrote the paper on "Goerbersdorf" I have been criticised about the statements made in it. To get at the truth, I wrote to a well-known professional

gentleman in New York, Dr. Arcularius, of 180 Second Avenue, who had himself been suffering from pulmonary phthisis, and had been for some time a patient in Brehmer's Sanitarium. The doctor's answer is very apt to strengthen my statements about the value of Brehmer's method, and although he does not seem to admire Dr. Brehmer personally, he says that the method used by him is by far superior to anything that has ever before been done for the cure of consumption.

The interesting part of Dr. Arcularius' letter reads as follows:

"..... I would like to call your attention to one point in your paper on 'Brehmer's Sanitarium in Goerbersdorf.' You state that the cold douche is used with almost all patients excepting those who are very debilitated. In fact you speak of its favorable influence in febrile conditions, and its beneficial effects in cases of night-sweats, etc. Allow me to contradict you on this point. After very careful observations made by Dr. A. v. Sokolowsky (the first assistant), the correctness of which I had a chance to examine myself, the use of the cold douche has been abandoned in cases of febrile excitement. *The existing fever is a contra indication for the use of the cold douche.* In such cases the reaction (redness and warmth of the skin) appears only to a very limited extent; the patients feel chilly; they remain cold; get weak and tired, and it often takes them hours before they feel as well as they did before the application of the douche. It is the powerful reaction, the warmth of the skin, the increased sensation of strength, the improved power of resistance against external influences, such as heat and cold, which makes the cold douche so valuable."

After criticising certain faults which exist in Brehmer's institution, or more particularly in his own personal character, Dr. Arcularius closes his letter as follows:

"..... Taking it all in all, after due consideration of everything that might be said pro or contra, I come to the well-founded conclusion that the *method* used in Goerbersdorf is by far superior to anything that has ever before been attempted for the cure of pulmonary phthisis. It is *not only* the pure air or the location of the sanitarium within the so-called immunity from phthisis which brings about such favorable and astonishing results. For what I said I could bring to bear the testimony of hundreds whose health has been restored at Goerbersdorf; fifty per cent. of whom would not breathe the air which surrounds this world, if it was not for Goerbersdorf."

PHTHISIS IN CHILDREN.

BY H. N. READ, M.D.

I think it a striking illustration of the little importance attached to children's diseases, that, in the whole course of this discussion on tuberculosis, if we except Dr. Chapman's remarks on feeding, no one of the speakers has alluded to tuberculosis as it is manifested in the young. It is a weakness, doubtless, of those specially interested in any one branch of medicine, that they are apt to think their own specialty of paramount importance, and whether children's diseases deserve the attention claimed for them by those who are specially interested in them I will not decide; but, I opine, there will be no doubt of the importance of studying in children, a disease hereditary, constitutional and diathetic, a disease which has received more attention than any other, in the adult state—a period of life where we can hope but for very poor results—a disease which has received but very little attention, comparatively, in the infant state, a period of life where we can reasonably expect much better results than in the former. It is very improbable that tubercular phthisis will ever be a curable disease. In spite of all the advancement of our science, we are able to do practically no more for this affection than our predecessors have done. It is a disease in which we can expect no help from nature; as a rule, therefore, the only way to treat it is to prevent it, and the only way to prevent it, the only way we can intelligently study it in this connection, *is in the young*. Little has been effected towards improving the constitutional health of the people, as a class, by arresting the morbid processes of constitutional life, or destroying the inherited disease germs while they are yet nascent. If we except vaccination, next to nothing, Yet it seems to me, that if we are ever to be able to treat successfully the many inherited diseases, cancer, tubercle, scrofula, gout, many of the neuroses, it must be while the germs of these diseases are as yet in a state of quiescence and non-development, in other words in the young, and *inherited diseases* must be subjected to *preventive* and *destructive* treatment, through action on the organisms of successive crops of infants, and the benefit will result if not in the next, at least in the future generations; and whether we solve this problem or leave it to those who come after us, the key of its solution, I believe, will be found in the study of the processes of infant life. Dr. Walker, in his remarks on Phthisis in Children, has omitted, through lack of time, some points which I shall briefly advert to. With regard

to the differences of tubercle in the adult and in the child. These are many and important. I have come to regard it as an axiom, that any child may become tubercular no matter what its inheritance. Given, a healthy child with a perfect heredity, and tubercles may be developed, either through poor hygienic surroundings, or by an uncured antecedent disease. I remark a very strong diagnostic point of difference between tubercle and scrofula in this connection. Scrofula may be developed extra heredity, it is true, as well also as rickets, but not in anything like the proportion that tubercle is. The number of tubercular children, far exceeds the combined proportion of scrofulous and rachitic children both, in my experience. Some other factor then, than mere surroundings, seems to be necessary for the production of scrofula. Again, an uncured disease in a child of sound constitution often produces tuberculosis, but it is exceedingly doubtful if it ever does scrofulosis, I have certainly never seen a case, and the authorities on the subject either do not mention this point, which is the case with most of them, or allude to it so vaguely as to make their remarks of little value.

Dr. McCorkle's quotation of the Hungarian authority in the non-identity of tubercle and scrofula, was of peculiar interest to me, believing, as I do, that tubercle and scrofula are as different as tubercle and syphilis; though, of course, they may exist conjointly. Dr. Walker has spoken of the peculiarity of tubercle in children, in that it exists simultaneously in several of the viscera, while in the adult it usually exists in the lungs alone. Another peculiarity consists in the existence of gray granulations and crude miliary tubercles in the lungs of children very frequently, entirely independent of each other, and of any other form of tubercular deposit. West found miliary tubercles alone in 20 per cent. of his cases, and gray granulations alone in 16 per cent.; the average proportion in adults being 1.6 and 4 per cent. respectively. Another peculiarity of tuberculosis in children is the great frequency of the so-called *yellow infiltrated* tubercle. Another difference lies in the fact that in from 10 to 15 per cent. of the cases of tuberculosis in children *the lungs* are free from deposit. This condition seldom or never obtains in the adult. Again, the *rarity of cavities* in the lungs of children constitutes another point of difference in the two classes of cases. Adults, it is well known, present cavities in at least 90 per cent. of the cases of pulmonary phthisis. In children only from 20 to 30 per cent. is found, and Bouchut's cases gave only 8 per cent. As a rule, the younger the child the less the liability to ulcerative excavation. Absence of the exhaustive *night-sweats*, absence of *hæmoptysis*, absence of *sputum*, all constitute striking peculiarities of pulmonary tuberculosis in children. Another and most important difference is in the prognosis. I regard it as

much more favorable in infants than in adults. The reason is problematical. Most likely to be found in the greater assimilative powers of children. Another reason, I believe, is, the greater toleration of cod-liver oil and fats generally by infants. I have never treated a child for tuberculosis to whom I could administer cod-liver oil. We all know what a large proportion of adults can never bear it in any form. Prominent among the *causes* of tuberculosis in children, not mentioned by Dr. Walker, I reckon *early weaning* in infants of good heredity. Of the infectious diseases I have found pertussis most often develop tuberculosis. With regard to the *frequency* of tuberculosis in *young life*, we know that it is a very common disease in children, more so than in adults; but the percentage of these cases is difficult to determine exactly. Very little information is to be found in the various works on children's diseases on this point, so I have searched the records of my dispensary practice. An examination of 4,600 cases of sick children, where diagnoses were made, gives between 8 and 9 per cent. of them as tubercular, either inherited or acquired. This, though not strictly accurate, may serve as an approximation to the frequency of the disease. Of tubercular children, 25 per cent. inherit the diathesis; the remainder acquire it. This is only from my personal observation. In closing, should like to add my unqualified approbation to Dr. Chapman's remarks on feeding children. I have long been convinced, from painful experience, of the error of feeding infants—tubercular or otherwise—large quantities of nitrogenized foods. The milk diet is the most suitable, both from theory and experience. Next in value, I hold the farinaceous foods, used, of course, with judgment. Fresh butter is useful; meats should be given sparingly. Nature provides for a surplus injesta of carbo-hydrates, by storing them up as fat; but no such provision is made for disposing of the nitrogenized injesta, if taken in too large quantities; consequently, they have to be excreted in the shape of decomposition products, and the emunctories are thus overtaxed, to their detriment. The Doctor's remarks, also, on the examination of fæces were of great interest to me. I always examine the alvine discharges in tubercular children with care, and much may be learned of the case from it. The presence of free fat in the fæces may be often detected in this way, not only in tuberculosis but in many other wasting diseases of children. As a symptom, I consider it of great importance, especially in the earlier stages of tuberculosis. A ready method of testing for fat in the fæces, and of ascertaining what is normal and abnormal in this respect, would be fully as valuable, I believe, as testing for albumen in the urine, and in the future is destined, perhaps, to play as important a part.

SODIUM SALICYLATE IN PHTHISIS.

BY A. HUTCHINS, M.D.

I desire to call attention to certain useful results to be obtained from Sodium Salicylate in the advanced stage of phthisis. I am indebted to Dr. B. A. Segur for the original suggestion. The cases in which its effects have been observed are too few, and the effects not sufficiently constant to justify any positive statements as to the precise indications for its use, yet, so far as have been observed, the effects are pronounced enough to justify further observation. My studies, thus far, have been limited to cases in the Brooklyn City Hospital, while Dr. Segur, in addition to some experience in St. Peter's Hospital, has had some cases in private practice, where its effects have been observed.

Allowing this paucity of experience to stand for marginal notes for future observers, it may be stated that the Sodium Salicylate acts promptly and pleasantly in modifying the colliquative diarrhœa of phthisis. Its action is accompanied by no such contingent or secondary effects as belong to the use of opiates. Of course, no *cure* of the diarrhœa is expected, and a recurrence of the symptom can be met by resuming the medicine. In connection with this, it has been noticed that the administration of the Sodium Salicylate has been followed by a marked amelioration of the cough, a subsidence of the hectic, and a diminution, sometimes suppression of the night-sweating. It is not known how far these effects can be prolonged by the continued use of the drug, nor to what extent it may be beneficial to intermit it with other remedies. The most that can be said with positiveness is, that without disturbance to the digestion, it, at times, serves an excellent purpose in modifying, to the great relief of the patient, some of the more prominent and distressing symptoms that belong to the latest stage of phthisis. This fact is the only justification for intruding the results of such a limited observation. Ten grains of the drug, repeated every three or four hours, have been found adequate. Dissolved in water, it will not be found offensive if taken in iced-water.

A POINT IN HOSPITAL MANAGEMENT.

BY J. S. PROUT, M.D.

(Read before the Society at its Annual Meeting by the retiring President.)

* * * * * *

A private patient in a general hospital pays for his board, etc., but pays nothing for medical services, and the physician who attends him is paid nothing—that is, the patient is necessarily a pauper, so far as the medical man is concerned, as the latter can make no charge for services rendered. Consequently, a physician who has a hospital appointment can obtain for his patient the advantages of a private room in the hospital only by giving up all pecuniary interest in the patient, while a man without a hospital appointment, or with one in the wrong place, can do so only by the entire loss of *both* patient and fees. This should not be. It is bad for patient and medical attendant; it is worse for the hospital and the medical men on its staff. Hence, without any qualification or reservation, I lay down the following

PROPOSITION: A general hospital should have private rooms, the patients occupying which may choose their own medical attendants, whether on the hospital staff or not, paying them for their services at their usual rates of charging. The hospital shall furnish such patients with all other necessaries at the ordinary published rates for private patients.

REMARKS: As a student, I was (1854-5) an interne of the Washington City Infirmary, a general hospital, in which there were, besides the public wards, private rooms for the reception of private patients. The latter were either under the care of the attending staff or chose their own medical attendants, who were required to be members of the local regular medical society. Members of the attending staff, when they were especially retained, were allowed to charge these patients for their services.

This arrangement had long existed and worked well—there was no difficulty in carrying it out.

The Infirmary is no longer in existence, having been destroyed by fire some years ago.

In the Boston *Medical and Surgical Journal* for July 30, 1868, p. 414, there is an interesting account of the Carney Hospital, a hospital situated on high ground on the south-western slope of Dorchester Heights, in South

Boston. A peculiarity of its organization was, that the members of the Consulting Board had the privilege of attending patients in the private rooms and of charging for their attendane as if at a private house. All regular physicians who were members of the Suffolk District Society had the same privilege after obtaining a written recommendation from one of the Consulting Board, and a permit from the Sister-in-charge, with the proviso that no physician or surgeon, whether a member of the Board or an outsider, should have more than one such private patient in the hospital at a time. The Sisters reserved the right to revoke this permission if it should be found impossible to carry out the plan with entire success. How well it has worked and what modifications have been made in it, the following extracts from a letter from Dr. H. Derby, one of the two ophthalmic surgeons, to the writer, dated Boston, Nov. 8, 1879, will show :

* * The Carney Hospital * * was established in 1863, and incorporated two years later. Its founder, the late Andrew Carney, devised a piece of land and a sum of money to the Sisters of Charity for the erection of a hospital. The present building was accordingly erected, and is wholly managed by them.

There is a consulting board of four, a visiting staff of eight, four medical and four surgical, and two ophthalmic surgeons ; also a physician for diseases of women, and a pathologist. These 16 form the staff and hold regular meetings. They nominate to vacancies, though the appointment has, in all cases, to be confirmed by the Sister in charge of the hospital.

There are six private rooms above, and a varying number (ordinarily four,) below. Board and nursing varies from eight to twenty-five dollars a week. To these rooms any regular physician in good standing, *i. e.* any member of our State Society, can send patients, a note from him and their ability to defray their expenses, being the only passport required. The number of patients any one physician my send, is only limited by the number of rooms. I, for instance, have at this moment seven rooms full. On these patients I operate and call at my own convenience. They are subject to the single restriction of not receiving visitors after 8 P. M. I ought also to add that the rules of the order do not allow the admission of venereal cases.

For eleven years I have sent my private patients to this hospital and have found it an immense convenience. There has been no clashing between myself and the rest of the staff, although for nine of these years I was an outsider, my appointment as ophthalmic surgeon only dating back two years. Many cases of ovariotomy are also sent here to be operated on, the elevated position of the hospital and the superior nursing being found two important factors in the successful treatment of such cases. And, in reference to this last point, that of nursing, let me say that the strong point of the Carney Hospital is the fact of its being in the hands of Sisters of Charity. They are sixteen in number, and fill all the offices, keeping the books, doing the cooking, supervising the washing, acting as apothecary and nursing. They cost us nothing but their dress and food, are precluded by their own rules from receiving the slightest personal gift, and, as you know, are, as a rule, the most faithful, conscientious and efficient of nurses.

All religions are welcomed at the Hospital, and clergymen of their own faith are provided all who desire them.

It will be seen from the above that the restriction as to number originally imposed has been abandoned. The rooms go to the first comer. Dr. Derby sends many of his operative and serious private cases to the Carney, and says he has "found it an immense convenience" to do so. His office is in communication by telephone with the Hospital.

In the Cincinnati *Lancet and Clinic* of Oct. 4th, 1879, p. 248 in a letter from St. Louis, Mo., I find the following: "Among the institutions of St. Louis, that are of interest to medical men, is St. Luke's Hospital, which has been carried on for a number of years, under the auspices of the Episcopal churches of this city. * * * They have wards for patients whose means are limited, and private rooms for those who are able to pay liberally. Patients taking private rooms employ any physician or surgeon whom they choose, whether on the staff or not."

Ground for a new building has been promised the trustees, provided they will raise money with which to erect it. This they hope soon to accomplish. The plan, therefore, must be considered to work well in St. Louis; it works well in Boston, and it worked well in Washington City. *It would work well here*, and has always seemed to me a great misfortune that it has not been adopted in Brooklyn. Often, for want of it, the patient loses the advantages that a hospital affords of good nursing, discipline, etc.; the physician is not able to do his patient full justice, and the hospital not only loses the money that the patient would pay, but, what may be of even greater value, it does not invite the friendly regard of the physician, who would naturally feel a personal interest in the welfare of an institution that gave him such increased facilities for carrying on his work.

The attending staff of a hospital may object to the adoption of this method on the ground that it will take patients from them. But this small concession is much more than offset by the fact that they will receive, in return, the privilege of treating their private patients in the private rooms of the hospital, with all its advantages in respect of nursing, etc., and also of charging for their services; thus assisting, in some degree, in getting rid of the abuse of misplaced and undeserved hospital charity.

As an outline of a working plan the following regulations may be suggested:

1. The attending staff shall have full medical control over the patients in the wards.

2. Patients who take private rooms shall be attended gratuitously by the attending staff on duty at the time; or they may choose their own physicians, whether on the staff or not, paying them for their services as if in a private house.

3. Any member of the Medical Board, or any regular practitioner in good standing recommended by one of the Board, may attend private patients, as provided for in the second clause of section 2.

4. The Medical Board may prescribe the hours during which private patients shall be visited by their physicians, and may at any time revoke this privilege as to any practitioner.

5. In order to prevent all misunderstanding, each receipt given to a private patient shall specify that medical attendance is to be furnished by the hospital; *or*, that the patient, having chosen his or her own physician, is to pay such physician for his or her services.

Let me detain you a moment longer to do an act of historical justice. The Washington City Infirmary, to which I have referred, was a general hospital, the attending staff of which formed, in large part, the Faculty of the National Medical College, a college that gave its instruction in the wards and under the roof of the Infirmary: "the courses of instruction being given within the hospital building." I matriculated in this college in 1852, and found this the method of instruction; a method that had been followed for years, and that continued for several years after I graduated in 1856; that is, until the Infirmary building was burned down.

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INTESTINAL OBSTRUCTION.*

BY A. R. MATHESON, M.D.

Having been invited by the President of this Society to present an article on Intestinal Obstruction, I have the honor of submitting the following observations for your consideration: To treat of this subject as fully as it deserves would require more time than the present occasion admits, therefore, I have endeavored to abreviate in every point where I can do so without destroying the practical object of this paper.

There are possibly but few disorders that come under the notice of the general practitioner, and that try to a greater extent his skill and judgment, and are so fraught with danger and suffering to the patient as intestinal obstruction. The many conditions which produce insuperable constipation have frequently been indiscriminately associated together under the terms Ileus, the Iliac passion, volvulus, the gripes, etc.

* Read before the Pathological Society. See page 409.

The following plan, depending on the several conditions producing this disorder, is in harmony with the many text books treating of this subject :

First, Compression, or, as Tanner says, " Extramural ; or those causes acting from without or affecting the serous coating ;" comprising :

Bands of adhesion.
Diverticula.
Adherent appendix coli.
Twists of the bowel, or displacement.
External tumors and enlarged glands.
Internal hernia.
Diaphragmatic.
Mesocolic.
Omental.
Obturator.
Pelvic.

Second, Intermural ; or, those cases in which the cause of the obstruction is in the changed coats of the intestine.

Intussusception.
Polypoid growths.
Cancerous diseases.
Cicatrices
Contraction following inflammation or injury.
Peritonitis and enteritis.
Prolapsus ani.
Inflamed hœmorrhoids.

Third, Intramural ; or, obstructions produced by the contents of the bowel :

Concretions.
Foreign bodies. Gall stones.
Impacted fæces.

I can only give some of these separate causes a passing reference, and refer you to the text books for a more elaborate description. The lower portion of the ileum is the part most frequently strangulated by loops, bands, or adhesions. The colon is sometimes constricted by old inflammatory bands.

Rokitansky gives three forms of twisting of the intestine :

First, Upon its axis.
Second, Upon the mesentery.
Third, Upon other coils of the intestine.

The sigmoid flexure, especially in the aged, may bend upon itself and fall over into the pelvis, and cause insuperable obstruction. It is more

frequently diseased than any other portion of the intestine, and the disease is usually of a cancerous character. Leichtenstern defines : "internal hernias, as those which lie entirely within the abdominal or thoracic cavities (hernia bursu, omentatis diaphragmatica, intermesenterica interpeploica), or which, as sub, or retro peritoneal, lie parallel to the abdominal wall, and project into the abdominal cavity, without ever making their way outwards, even when their size increases.

In contra-distinction to these external hernias are those which the action of the diaphragm forces outwards, and which, as they increase in size, can be detected on the outside."

The second division includes those cases in which there is a change in the coats of the intestine itself.

Intussusception has been described as that condition where one part of the intestine is drawn into another portion, just as the finger of a glove can be made to glide within itself. It is not confined to any age, although it occurs most frequently during the first year of life. Leichtenstern's statistics of four hundred and seventy-nine cases of invagination of all kinds, gives fifty-two per cent. as occurring during the first ten years of life. Brinton, Rogers, Leichtenstern and others have described the anatomy of intussusception, and have recognized the following varieties, according to situation :

First, Invagination of the small intestine.

Second, Invagination of the small into the large intestine through the ileocæcal valve. This variety has been named ileo colic.

Third, Ileocæcal invagination. In this the cæcum is inverted and passes into the colon, carrying with it the ileum, which forms the innermost of the three layers. The relation of the ileum to the cæcum is unaltered, and the ileocæcal valve forms the presenting part, or lowest point of the intussusception.

Fourth, Colic invaginations.—Here colon passes into colon, the ascending into the transverse, the transverse into the descending, the latter into the sigmoid flexure, or the sigmoid flexure into the rectum.

Invagination of the small intestine occurs most frequently in the lower part of the ileum, *although it may occur at any point* it is very rare in infants, more frequently in adults than the ileo-cœcal variety.

Lichtenstern gives the ileo-colic variety as the rarest form of the disease, including only eight per cent. of the total number. The ileocœcal variety occurs more frequently than all the rest. In infants under a year old it occurs twelve times as frequent as intussusception of the small intestine and between two and three times as often as all the other forms combined.

Invagination frequently occurs during the death struggle of infants.

This form is not attended by any inflammatory changes, can be easily reduced and is usually located in the small intestine.

The many conditions which cause or favor intussusception may be briefly summed in the following sentence : "Paresis of a limited portion of the intestine, associated with vigorous peristaltic action, excited by any cause whatsoever, offers suitable conditions for invagination."

Cicatrices following ulceration (for example the specimen which I recently placed in the museum of this society.) Chronic peritonitis and enteritis causing narrowing of the canal when acted upon by an irritant or by spasmodic contractions, may render the already partial obstruction complete.

The third division includes obstructions due to the contents of the bowels—foreign bodies swallowed and also introduced into the rectum. Among these may be enumerated portions of string and hair, pieces of wood and metal, artificial teeth, forks, glasses, pomade pots, a pestle, coffee cup, iron pinchers, cruets, etc., etc.; causing more or less complete obstruction. Gall stones of considerable size may pass per anum without giving any annoyance, but occasionally they are so large as to cause fatal obstruction. Those capable of causing occlusion occur, according to Lichtenstern's statistics, in the proportion of thirty-two in females to nine in males.

Obstructions by gall stones usually occur late in life, after the age of fifty. The youngest person with obstruction by gall stones, is one mentioned by Peacock as twenty-seven years old.

"Fecal accumulation," says Habershon, "rarely if ever causes fatal obstruction, though death may arise from the violent remedies employed."

The intestine above the part obstructed usually attains an enormous size, and in chronic cases the muscular coat becomes hypertrophied. The coats of the intestine at the seat of the stricture become greatly congested, there is intense venous repletion, the mucous membrance becomes purplish in color, enteritis supervenes, and afterwards ulceration. The inflammatory action extends to the peritoneum, so that it is very rare to find a case of fatal obstruction without peritonitis.

In the records of Guy's Hospital, during a period of twenty-three years, there were found in 7,934 autopsies, one hundred and fourteen cases of intestinal obstruction.

Leichtenstern states that, in England, out of every 100,000 inhabitants, nine die annually of constriction or occlusion of the intestines (exclusive of external hernias and malignant neoplasms). Brinton, in his collection of 12,000 autopsies, gives one case out of every 280, due to occlusion

of the intestines. From the various statistics examined, it is safe to give one death in every 300 to 500 deaths, as due to this cause.

Leichtenstern's statistics, embracing 1,541 cases of occlusion of different kinds, and at the same time showing the relative proportion of males and females will bear reproducing in this paper :

	Males.	Females.
Strangulation by false ligaments	52	59
" by the omentum	43	15
" by diverticles	52	14
" by the appendix vermiformis	21	13
" by internal hernias	25	6
Diaphragmatic hernias	163	52
Intussusception	283	157
Obstruction by gall stones	9	32
" by foreign bodies	37	10
" by intestinal stones	15	5
Strangulations in holes and fissures in different organs and parts of organs in rings, formed by the adhesion or adhesions of abdominal or pelvic viscera, or with the walls	12	17
Compression of the intestine by the mesentery	10	8
" of the intestine by viscera, etc	15	37
Twisting of the sigmoid flexure and ileum	23	10
Knotting of two intestinal loops	20	1
Acute bending by displacement, with or without simultaneous compression by the mesentery	8	6
Ileus paralyticus, fecal obstruction	10	15
Constrictions of the intestines (whether they cause death by ileus or otherwise) chronic kinks, different kinds of stricture, constriction by chronic peritonitis, adhesions, etc	35	71
Cancer of the intestine	19	16
Cancer of the rectum	80	63
Total	M. 934	F. 607

Having alluded to the causes of intestinal obstruction, we will now consider the means of determining its existence, and, possibly, its location. The are many occlusions that we can diagnosticate without much difficulty ; for instance, those situated in the rectum, those caused by foreign bodies swallowed, and by gall stones, when occlusion occurs soon after an attack of hepatic colic accompanied by icterus, and also by compression due to tumors.

The existence of the tumor is usually known before the occlusion occurs. We are, however, in many cases, not able to do more than form a supposition regarding its anatomical cause. Even those processes of occlusion which are distinguished under favorable circumstances by definite peculiarities and objective signs, and make an absolute diagnosis possible, sometimes occur without them, and are then not to

be distinguished from other causes of impermeability. There are cases recorded when death has taken place without any marked symptoms, and the autopsy has revealed internal strangulation.

The most significant signs of closure of the bowel are constipation and stercoraceous vomiting. The contents of the intestines below the point of obstruction may be evacuated and fluid feces may escape when the small intestine is to all intents closed, but complete constipation is the rule in true obstruction.

Pain is usually present in varying intensity, from a mere feeling of weight to intolerable suffering. The location and character of the pain should be carefully observed, as it frequently coincides with the seat of the lesion. It may begin with a sudden catch in the bowels, as of some displacement, and be very violent, or so mild as to barely attract attention. Usually, as the disease advances and peritonitis and enteritis supervene, and fluids and air accumulate, the distension becomes so great as to produce terrible misery. In strangulation of the small intestine, either near the cæcum or in the jejunum, the pain will have its seat chiefly about the umbilicus.

When peritonitis is fully established the pain becomes more or less diffused.

"The absence of pain is no positive evidence that even the most unmanageable sources of obstruction are not present." [McLeod.]

Vomiting: When irritating and drastic purgatives have not been administered, the character of the vomiting and the time at which it commenced are important guides. The higher up the obstruction lies the sooner will vomiting take place.

Habershon relates an instance where the obstruction arose from a band of adhesion high up in the jejunum, the vomiting was so sudden as to resemble that produced by cerebral disease.

The same author records a case of twisted cæcum when the obstruction was near the termination of the ileum, in which the vomited fluid was so fully fecal that for a time it was supposed that a communication existed between the stomach and transverse colon.

The vomiting is usually accompanied by nausea, which tends to increase the distress and exhaustion. Only food or bilious matter is ejected at first, but afterwards feculent vomiting appears, even when the occlusion is in the small intestine. Dr. McLeod, of Glasgow, says this is the only certain sign of complete occlusion.

I have seen cases of fatal obstruction when there was no feculent vomiting.

Hiccough appears earlier, and is more distressing in strangulation of the small than of the large intestine.

Drs. Barlow and Sedgwick have called special attention to the amount of urine secreted as a sign of the seat of the obstruction.

Habershon opposes this view on the ground that the vomiting, fever and local inflammation will also govern the quantity of urine secreted.

Swelling, confined to a portion of the abdomen, is an instructive sign if the patient is seen early. It arises from the accumulation of fluids above the obstruction, and later on from flatulent distension. Careful percussion will frequently indicate the seat of the obstruction.

In examining a patient with intestinal obstruction it will be well to consider the following memorandum :

Has he suffered from any abdominal trouble or inflammation, colic, gall stones, dysentery, hernia or any similar attack? Has he been using any article of food or medicine likely to produce such symptoms? Has he been making any sudden effort immediately before the attack began? Is there any lump in his abdomen, and if so, how long has it been present? Is it movable or painful, and has it altered its size, shape or position? Are there any vermicular movements, and are they arrested at any point?

If it is a child, the obstruction is probably due to intussusception or peritonitis, as the aged are more frequently the victims of malignant disease and the impaction of intestinal contents.

Hutchinson, of London, says: "Malignant stricture may be suspected when, in an old person, continued abdominal uneasiness and repeated attacks of temporary constipation have preceded the illness."

It is to be noted also that the constipation is often not complete.

The cancerous cachexia is also usually present.

Tumors usually give a prior history, and can generally be detected by palpation, or by examination by the vagina and rectum, care being taken not to be misled by scybalous masses.

If repeated attacks of dangerous obstruction have occurred with long intervals of perfect health, it may be suspected that the patient is the subject of a congenital diverticulum, or has bands of adhesion, or that some part of the intestine is pouched and liable to twist.

If in the early part of a case, the abdomen becomes distended and hard, it is almost certain that there is peritonitis.

If the intestines continue to roll about visibly, it is almost certain there is no peritonitis.

Intussusception may be recognized by the attack occurring suddenly, with or without diarrhœa. Then follows vomiting—very soon in children, and also when invagination is high up—which in a short time becomes stercoraceous. Abdominal pain, interrupted and colicky is often exactly localized in the region corresponding to the intussusception and is rarely accompanied by rigors.

Constipation in acute intussusception is complete.

Vomiting, pain and constipation are present in all forms of acute intestinal obstruction, and therefore cannot be regarded alone as evidence of intussusception.

Tenesmus—violent straining—more severe the nearer the intussusception is to the rectum—accompanied by bloody mucus discharges from the bowel, almost always present, no matter where the seat of the affection, and must be regarded as a very important symptom, "since, with the exception of twisting and knotting of the sigmoid flexure, no other cause of acute occlusion of the intestine is accompanied by bloody mucus discharges." (Lichtenstern.)

I will here observe that we must be careful to differentiate between this discharge and dysentery, by the entire absence of fecal matter and other intestinal bleedings, especially rectal polypi in children.

A very important symptom is the discovery of the usually cylindrical sausage-like tumor, the search for which should be made under an anæsthetic by manipulation through the abdominal walls, and by the anus.

In the early stages of the affection, especially in children, the parietes of the abdomen remain lax, and there is usually but little tympanites.

The detection of the tumor will be more or less difficult according to its size, its situation, and the age and obesity of the patient.

When peritonitis has occurred, the distension of the abdomen may be so great as to render palpation of little value.

Lichtenstern says that this "tumor can almost always be felt in colon and ileo-cæcal invaginations," but only seldom in ileum invaginations.

The chief distinction of intussusception from all other varieties of obstruction, is the suddenness of the invasion, the acuteness of the pain, the rapidity of the prostrating effects, and above all, the detection of the intussusception itself." (Brinton.)

A person with a small hand may obtain useful information by introducing it into the rectum while the patient is under an anæsthetic, as recommended by Simon, of Heidelberg.

The rectal sound and also enemata may afford some information.

I have endeavored to present the symptoms of intestinal obstruction as clearly as my opportunities of observation and the limits of this paper can admit, and yet I know that each individual case will present many features peculiar to itself, that will obscure the symptoms and contradict many of the statements made in this paper, and that we will frequently find ourselves by the bedside of a patient suffering from internal strangulation and wholly unable, after the most minute and careful examination, to form an opinion as to the special anatomical cause of the occlusion.

Fortunately, operative measures excepted, "our treatment would not be different," quoting Lichtenstern, "even if we were able to say whether the cause of the occlusion was a strangulating false ligament, a diverticle, or the appendix vermiformis; whether a fissure in the mesentery or omentum, torsion, knotting or acute bending; whether the lodging of a gall stone in the ileum, compression by the mesentery, or an acute invagination of the ileum. On the other hand, those causes of occlusion, diagnosis of which during life may be important in indicating the choice of a special therapeutical measure, can actually be recognized in the great number of cases. Among these are occlusions of the rectum accessible by direct treatment, fæcal obstruction of the colon, ileo-cœcal and colon invaginations, compression by tumors, cysts, etc.

I will not allude to the various methods of treatment from the days of Hippocrates, Aretæus and Galen to the present day; neither will I refer to the treatment of cases of chronic incomplete obstruction, but in as brief a manner as possible, lay down such a plan of treatment as I would wish to employ to-night in cases of acute intestinal obstruction.

Treatment.—Give neither food nor medicine by the mouth.

Use anæsthetics early, in order to examine the abdomen and rectum, before there is much tympanites, (of course, I assume that the physician has already satisfied himself that there is no external hernia). Empty the rectum by free enemata, and examine by means of the speculum and by the introduction of the hand,—providing, always, that you have a small hand—and also by the rectal sound, and if the patient be a female examine carefully through the vagina. Auscultation may, in some cases, give useful information.

In stricture, due to cancerous disease, to cicatrices from any cause, little benefit can be expected from any treatment save operative means.

In the various invaginations in internal hernias, in kinking and twisting of the intestines, in pressure from a movable tumor or viscus, large enemata of warm mucilaginous water is the best therapeutic agent we have, and these should be administered through the long rectal tube, slowly, carefully, with the patient's shoulders low, the buttocks high, (with the patient almost inverted, if you please) where he can have the full mechanical benefit of position, and have him fully anæsthetized. You want complete muscular relaxation.

Gentle manipulation at the same time may be employed, the bowels may be gently drawn towards the sternum. If this fails in restoring the parts, give your patient opium, hypodermically—not sparingly—and wait a few hours—for Lichtenstern tells us that "there is no cause of acute occlusion of the intestine, which cannot spontaneously disappear as well as originate,"—and then insufflation of air may be employed.

Enemata of ice-water, or with turpentine, or with carbolic acid water, excite energetic reflex peristalic action, and should not be used. [Lichtenstern.]

Purgatives must also be dismissed for the same reason.

I will not occupy your time, gentlemen, with what we should not do, but ask, what shall we do next? We have repeated our enemata several times, also our insufflation, also our manipulation; our opium has given our patient comfort, but the malady still exists. Shall we fold our arms and gently wait for spontaneous reduction, or until peritonitis is established, or for sloughing of the intussuscepted gut. Peritonitis means death, and the slender hope offered by sloughing, sustained only by cases that may be counted on your fingers, will hardly justify such a course. We must do precisely as we would in an external irreducible strangulated hernia—operate, explore the abdominal cavity, and ascertain where and what the injury is. If it is an intussusception or an internal hernia, reduce, if possible; if it is a kink, twist, or knot, restore to its normal condition; if compressed by a band, divide the band; if by a tumor, remove the tumor; if by an impermeable stricture, make an artificial anus.

Dr. Teale says, "of the immunity with which the peritoneal cavity may be opened. I need hardly remind you how constantly this is done in ovariotomy.

"It is not always the operation that proves fatal, it is the delay in performing it.

"Look at Kieth's 39 cases of ovariotomy without a death.

"Look at the confidence with which he reckons upon recovery, with a smooth peritoneum, without adhesions."

Is it necessary to give further proof of the propriety of exploring the abdominal cavity in such a grave disorder—need we refer to the statistics of operations by Spencer Wells, of England, M. Péan, of France, or the surgeons of our own country?

In my collections of the statistics of 84 cases of abdominal section, collected from the papers of Prof. H. B. Sands, Ashurst, of Philadelphia, and various other medical magazines, the analysis of which must be deferred for some future occasion, the recoveries average about 36 per cent.

The age of the youngest patient recovering after abdominal section being 6 months (Prof. H. B. Sands), and the oldest 79 years. Erichson (page 818 of Science and Art of Surgery) says: "If, however, it can be satisfactorily made out that there is an internal obstruction, and more especially, if the intumescence can be felt, it will evidently be the duty of the surgeon to give the patient his only chance."

Thomas Bryant, in the British Med. Journal, March 8th, 1879, ex-

presses himself as decidedly in favor of an early operation in intestinal obstruction. Marsh, of England, and many distinguished surgeons of this country and throughout the whole civilized world, advocate an early exploratory operation, but not so zealously as the importance and danger of the malady demands.

I trust that the gentlemen present will add their experience with this subject, for it is only by a comparison of results that we are enabled to discover the merits of any methods of treatment.

THE BROOKLYN PATHOLOGICAL SOCIETY.

Regular Meeting, Thursday, Dec. 11th, 1879.

The President, Dr. F. W. Rockwell, in the chair.

CANCER OF OMENTUM : EXPLORATORY OPERATION.

Dr. Rockwell presented a specimen of the above disease, with the following history :

The patient from whom the specimen was removed was a lady, 62 years of age, who had, up to the appearance of her present trouble, been free from disease of any kind. Her family history was as good as her personal one, so far as any specific or cancerous taint was concerned. Early last March, she was startled by the appearance of a tumor in the right iliac region, for which she consulted Dr. Carnochan, of N. Y., supposing it to be some form of hernia. The tumor was apparently of an inflammatory nature, and situated in the abdominal parietes. A doughy, somewhat elastic, swelling prevented any complete examination, and it was not until this had subsided that the Dr. was able to map out a movable globular tumor, which, from its mobility and apparent attachments, he concluded to be ovarian and of one of the solid varieties.

Several months having elapsed during which the patient was becoming emaciated, and some pain was felt in the neighborhood of the tumor, she was taken to Dr. Emil Noegerrath, who, after studying her case for several weeks, pronounced the case one of malignant disease of the kidney or liver. The patient then presented herself to me with the foregoing history, on November 2d. Upon questioning her, I found that in the preceding eight months, she had lost fourteen pounds, that she had never had jaundice, nor had there been any change in the

quantity, quality or color of the urine voided during that time. Examination of a specimen sent me for the purpose, elicited nothing further. Lying in the right iliac region, about three inches above Poupart's ligament, was a tumor of an irregularly globular shape, and about the size of an orange. It was so tender to the touch, that I was unable to satisfy myself as to its attachments. A vaginal examination showed the uterus to be perfectly movable, the region of the ovaries free from sensitiveness, and no pelvic connections with the mass above. I declined to make a positive diagnosis, though strongly suspecting omental cancer, from the fact that the inguinal glands were enlarged slightly on both sides. No cachexia, no ascites, and no œdema of the feet existed to point to any of the great glands of the abdomen as the probable seat of the growth. To clear up the diagnosis, I proposed an examination under ether at an early date. This was acceded to, and on Tuesday, Nov. 4th, ether having been administered by Dr. Bunker, I found that the mass could, with comparative ease, be pushed over into the left hypochondrium, and was freely movable *above* a line drawn from one superior spinous process to the other. *Marked resonance on percussion existed between the lower border of the ribs on the right side and the upper surface of the tumor.* Examination of the lumbar regions by manipulation and percussion threw no light on the supposed renal origin of the disease.

A sound introduced into the uterus showed its cavity to measure $2\frac{1}{2}$ inches, and that no connection whatever existed between the mass and itself. A diagnosis of omental cancer was then given to the husband of the patient, in which Dr. Bunker concurred.

Upon hearing that death was inevitable and within a few months, the husband of the patient at once proposed an operation for the removal of the disease, and although its extreme risks, and the almost certain rapidly ensuing death were plainly put before him and the patient herself, both still insisted on taking the infinitely small chance of a few weeks relief from the suffering which had been rapidly increasing during the last month. As the growth seemed solitary, and constitutional reaction was so entirely absent, and the possibility of removing the growth fair, I consented to make an exploratory incision, to be followed by an operation if deemed advisable, distinctly informing both the patient and her husband that failure was probable, and a rapid termination of the case imminent. These statements were met by an unflinching courage on the part of both, which seemed equal to any emergency. The patient having been prepared as for ovariotomy, during the next twelve days, seemed at the end of that time to be in as favorable a condition as I could expect, and accordingly on Sunday, Nov. 16th, in the presence and with the assistance of Drs. John Byrne, Bunker, Fowler and

Freeman, I made an incision in the median line just below the umbilicus about two inches in length. On passing the finger into the abdominal cavity, a large cyst was felt resting on a mass of hard carcinomatous tissue, and closely surrounded by several smaller nodules of the same character. No attachments to the stomach or intestines could be felt, and the whole mass seemed freely movable. The upper border of the cyst could not be easily examined, and it was deemed advisable by those present to extend the incision upward for about 3 inches. This was accordingly done, when it was found that the cyst was closely adherent to the lower border of the liver, the right lobe of which was thinned and expanded over its surface. Percussion over the surface of the abdomen, *even now with the tumor* in situ, gave a *resonant area* between the lower border of the ribs and the growth, a condition accounted for at the autopsy by the relations of the colon to the liver and growth. A slight wound of the thinned lobe of the liver was now found to be slowly oozing venous blood, and was touched with the actual cautery, giving no further trouble. The abdominal cavity was now carefully cleansed of the small amount of blood which had found its way into it, and the wound closed and dressed with salycilated cotton covered with carbolized lint and gutta percha sheeting—a flannel binder securing everything in position. The operation was performed under carbolized spray, and with every antiseptic precaution. The patient was put to bed with warm bottles to feet, and treated as after ovariotomy. Her pulse was 120, and she evinced signs of considerable shock, but rallied promptly and conversed calmly and distinctly within an hour after removal from the table. During the next two days, the temperature never rose above 99°.

Slight vomiting and abdominal pain was easily controlled by morphia hypodermically. Brandy and beef juice by the rectum, and small quantities of milk by the stomach kept her comfortable until early Tuesday morning, when a slight chill occurred, and the patient showed signs of sinking. The mind clear and calm until her death, which occurred at 1.25 P.M. on the same day.

Autopsy, Wednesday, November 19th, at 4 P. M., in the presence of Drs. Carnochan and Bunker. On removal of the dressings—which had remained perfectly sweet since the operation, and were slightly stained with a pinkish serum—the wound was found to be agglutinated throughout its lower two-thirds, the upper being ununited. The peritoneal cavity free from any effusion or lymph. The parietal layer of peritoneum over the right hypochondrium injected in patches, as if about to become the seat of inflammation. A patch of similar character, about two inches in diameter, in left hypochondriac region. Upon examining the wound in

the capsule of the liver, it was found free from inflammation and apparently undergoing the process of repair. A thin eschar still remained to show the action of the cautery. A large cyst, evidently the dilated gall bladder, formed the bulk of the tumor noticed during life. It was firmly adherent to the superimposed right lobe of the liver above, and the hepatic flexure of the colon below. The lobus quadratus was also involved in the mass. In the walls of the gall bladder were several nodules of scirrhous deposit, and in the transverse fissure of the liver a large mass of the same deposit, which evidently had its origin in the gastro-hepatic omentum. This mass had bound the numerous ducts and vessels in its vicinity into an irregular tumor, in which only one or two structures could be identified. A similar deposit was developed in the layers of the meso-colon. The rest of the abdominal cavity was free from disease.

The Microscopical Committee reported that the specimen was a spindle-cell sarcoma, some portions of it containing round cells.

SARCOMA OF TESTICLE AND ABDOMEN.

Dr. E. A. Lewis presented a testicle and portions of a tumor removed from a man 54 years old, a native of the United States. The family history was good. The personal history was that, twenty years ago, he had some pulmonary difficulty, for which he took cod liver oil, and that five years ago he fell from a ladder and suffered from orchitis on the left side as the result. There was no specific disease. The swelling of the testicle never fully disappeared.

On July 7th, 1879, while lifting a heavy milk can, he felt something give way with a snap in his back. The left testicle began to swell almost immediately, and after a few days he was obliged to remain in bed. The testicle became greatly swollen and very painful.

On September 20th, at a consultation, the scrotum was explored, and a number of ounces of highly albuminous fluid drawn off. The testicle was not much enlarged, but tender and hard. At another consultation, September 27th, the condition of the patient did not warrant the removal of the testicle. From this date he failed rapidly ; had diarrhœa, severe sweating, anorexia, etc. He died October 18th.

At the *autopsy* the brain was not examined. With the exception of a few old adhesions of the right pleura, the thoracic organs were healthy. In the *abdomen*, the left kidney contained a cyst and the supra renal capsules were adherent. The large intestine contained many scybalous masses. About four (4) inches of the jejunum was adherent to a *tumor* in the posterior part of the abdomen. Its outlines were not well marked. It was about six inches long and four inches broad, and was close to the spinal column, so that the great vessels were removed with it. On in-

cision it was found to be soft and friable. A yellow fluid poured out in abundance. The left testicle was swollen, and showed a degeneration similar to that of the tumor. The microscope shows an abundance of small, round, nucleated cells.

SEPARATION OF LAYERS OF AMNION.

Dr. Jno. Merritt presented the following case: B. M., aborted at about the fourth month. The fœtus was inclosed in the amniotic sac. The cord extended through and beyond the sac about one inch. The placenta and chorion were separated from the amniotic sac. The case illustrates dropsy between the layers of the amnion.

SPECIAL ORDER: DR. A. R. MATHESON ON INTESTINAL OBSTRUCTION.

(See page 395.)

DISCUSSION.

In reply to Dr. Minor, Dr. M. stated that, so far as he knew, the cicatrices of typhoid ulcers did not lead to stricture.

Dr. Pilcher was surprised at the frequency of intestinal obstruction as shown by statistics. The helplessness of the physician in dealing with them was noticeable. An important point was the lack of any definite symptoms indicating the exact condition present. Fecal vomiting is often absent; fixed pain is not a reliable symptom. All this points, in acute cases, to the importance of making an abdominal opening for diagnosis. The reports of such cases encourage to this step. Abdominal incision should be more frequent. Adhesions of the peritoneal folds, forming constrictions and making fissures through which internal hernia may occur are so common that, after other means have failed, we should be culpable in not incising the abdomen.

When tumors of long standing exist, a better judgment can be formed as to the condition present; but it is in acute cases that this exploration would be more useful.

Dr. Segur spoke of Habershon's remark, that if patients did not die of obstruction, they were liable to die from the effects of treatment received.

He referred to a post-mortem examination made by him in a case of cancerous disease of the sigmoid flexure, in which the patient before death had several attacks indicating closure of the small opening remaining, which had been relieved by purgatives until the fatal attack, when peritonitis occurred. The descending and transverse colon was pouched to three or four times its natural size. The contents of this pouch were fecal matter, with much serum, showing the effect of the purgatives. Hence the danger our patients are subject to at our hands.

He thought that the operation recommended by Dr. Pilcher might be another element of danger.

Dr. Pilcher replied that it was only in acute cases, when the increasing gravity of the symptoms showed that death was inevitable unless relief was afforded by operative means, that he would recommend it.

Dr. Matheson quoted three cases operated upon in England. In one an artificial anus was made in the linea alba, and the patient recovered. The other two died.

Dr. Wunderlich agreed with Dr. Pilcher as to operation on acute cases. He quoted Allingham's views as to colotomy in cancer of the rectum. Though it did not prolong life, it relieved suffering.

LITHOPLAXY.

Dr. Ernest Palmer presented (at the Nov. meeting) specimens removed from the body of a man upon whom the operation of *lithoplaxy* had been performed by Dr. Keyes, of New York. The patient had previously been attended by Dr. C. L. Mitchell, who kindly contributes the following history :

Mr. S., first attack was June 5th 1873. There was urgent and painful desire to pass water, with much difficulty in accomplishing it ; a straining effort, continued for some time, being necessary before the urine would begin to flow. These efforts were attended with severe spasmodic pain and sense of obstruction at the neck of the bladder, and pain in the uretha, near its origin. Sleep was impossible without anodynes, There was no fever. The urine strongly acid.

Up to time of attack been able to pass water freely and in a full stream. Had had occasional slight attacks of pain in the bladder, but nothing of such severity as the present attack.

Was, and had for some time been, passing through a period of great financial trouble. resulting in the loss of all his property.

Diagnosis: Irritation of over sensitive bladder by acrid urine—probably due to disturbed cerebral circulation.

Soda (bicarb.) was administered as freely as the stomach would bear; diluents given abundantly; Laudanum in drachm doses by enema; hot fomentations and poultices were applied locally; and Ergot prescribed in full doses.

June 7th. Pain and frequent micturition mostly subdued, but the difficulty in passing water continued, requiring much effort for its evacuation.

June 8th. Urine still abnormally acid. Gave ten grains of calomel, and followed it by teaspoonful doses tart. sod. and potass. repeated every two hours.

June 9th. Urine alkaline, and distressing symptoms subsiding.

June 13th. Discharged, cured.

The second attack occurred 3½ years after, December 4th, 1876. This was similar to the other, the patient being under treatment 17 days, when he was discharged, cured.

The patient did not again apply for advice till after another interval of more than a year and a half, viz., September 9th, 1878. The same symptoms were present as during former attacks—less urgent but more persistent. Urine was not detained more than two hours, and was passed mostly by catheter. The pain was always at the neck of

the bladder, and in the urethra near the bladder, at a point where obstruction to the passing of the catheter was frequently encountered. A considerable discharge of mucus accompanied each evacuation of urine.

Diagnosis: Chronic cystitis due to acrid urine and enlarged prostate. Calculus was not supposed to exist because of the long intervals between the attacks.

September 9th. Half teaspoonful doses of fluid extract of ergot were given three times a day, and the bladder frequently washed out with warm water containing a little chloride of sodium.

September 11th. Had slept all night without urinating until 5 A. M. It was the best night he had had for a month.

September 17th. Declares himself a great deal better. Directed same treatment to be continued, suspending it when the symptoms were relieved, and resuming it when needful.

November 2nd. Six weeks later, was summoned to prescribe for acute orchitis. After the use of saline cathartics constant application of solution of hydrochlorate of ammonium, the free administration of soda, with rest and support of the inflamed organ, the symptoms disappeared in three days from commencement of treatment.

November 5th.—Complains that he cannot insert the catheter; when the point reaches the sore place in the urethra it will go no further. Directed its introduction as far as it would readily pass, and then inject a little warm water to dilate the urethra. Acting on this suggestion, the patient had no further trouble in using the catheter.

December 31st.—Two months later he called at my office. The disease of the bladder was much aggravated, and I requested him to place himself under the care of a surgeon. Dr. Rushmore was accordingly called in. An examination for stone was carefully made, but with negative result. At a subsequent time another sounding was made, but with no better satisfaction than at first. Still suspicious of the existence of calculus, Dr. Rushmore desired to make another examination, but the patient refused, and Dr. Rushmore withdrew from attendance.

After the withdrawal of Dr. Rushmore I called on the patient as a friend, and found that he had become materially worse, severe cystitis and albuminuria being present. My prognosis was that, whether calculus were present or not, the result would be fatal.

The patient went under homœopathic treatment.

In October, 1879, I was summoned by the patient, and informed that Dr. Keyes had been recently called in, had examined for and detected a stone in the bladder, and proposed cutting it out. I was requested to be present at the operation and to assume the subsequent treatment.

On the 18th of October Dr. Keyes performed the operation of lithotrity. The operation was boldly, skillfully and resolutely performed, occupying about one hour and a quarter.

When the anæsthesia was passing off, the patient became restless, manifested much pain, and complained that he was not at all relieved. Forty minutes after the operation the pulse was 132, the temperature 97.7, and I administered 6 min. Magendie's solution of morphia hypodermically, followed in a few minutes with milk and whisky. The patient having been habituated to ¼ gr. rectal suppositories twice a day, or every twelve hours, I directed their administration every six hours. At 9½ P.M. the pulse had gone down to 112 and the thermometer up to 98°.

He was directed to wash out the bladder with warm water after every passage of the urine, and twice a day to syringe thorougly with Squibb's one per cent. solution of carbolic acid, weakening the solution if it caused pain.

October 19th.—Had passed a better night than usual, but had waked every hour to pass water. Urine at first bloody, but later was entirely free from blood, with whitish sediment. Color darker than before the operation. Offensive. Was comparatively comfortable during the day. Took no suppository between 2 and 10 P. M. Relished his milk and beef-tea. Pulse, while sleeping, 88.

October 20th. Passed a pretty good night. Urinated 10 times in 12 hours; "some of these were almost nothing." Took 3 goblets of milk during the night. Pulse 100; ther. 98°. In the afternoon seemed better; relished food; went two hours without passing water; more mucus than before; pulse 100; ther. 100.5°. Bowels not having been moved since 17th, an enema was given, which produced the desired effects.

October 21st. More nervous last night. Micturition hourly; nurse says he is always more restless after suppository. Catheter enters easily, but the urethra is sore. Took 3 goblets of milk, ½ cup of beef tea. Pulse stronger, 90; ther. 98.5°. Directed 1½ suppositories (or ⅜ gr. Morph.) every 4 hours. Lengthen the interval, if sleep is induced.

October 23rd. Took 1½ suppos. at 6 and 10½ o'clock last evening and 9 o'clock this morning. The desire to urinate comes every hour. Pulse 88. R.—Morph., gr. ⅜; atrop $\frac{1}{50}$; Butyr. Cacao, q. s. Make suppos. and use as before.

October 24th. Had taken but one suppository, and had a bad night. Complains of much pain at the neck of the bladder. A second suppository taken at 9 a. m.; gave more relief. Pulse 96; ther. 98.4°.

October 25th. Irritation of bladder less. Had 3 constipated motions of the bowels and then three loose ones. Begs off from milk diet because it always constipates him. Discharges from bladder more viscid. Dr. Keyes advised a return to the old doses of ¼ gr. suppos. twice a day.

October 28th. Patient says he will try to do without any morphia.

October 31st. Patient had resumed the use of the ¼ gr. suppositories. At this time Dr. Palmer was put in charge of the case.

Took charge of Mr. S's. case by direction of Dr. Keyes, on Saturday, Nov. 1st. No change in the general plan of the treatment inaugurated at the time of the first operation was made until Tuesday, Nov. 4th, immediately following the second operation.

On Nov. 4th, at 3 o'clock, P. M., the second sitting was had. The patient being etherized, a searcher was passed into the bladder, and after exploring that viscus for a period of 3 or 4 minutes, the calculus or fragment was detached presumably at the orifice of the right ureter. The searcher being withdrawn and the lithrotrite introduced, the calculus was grasped and crushed—at least five minutes elapsing before the engagement of the calculus.

The balance of the operation was a repetition of the first in all its steps, and was completed in about 35 minutes. The patient rapidly came out of the anæsthetic and immediately complained of the great soreness of the urethra. This symptom was the prominent one during the remainder of the patient's life.

The instructions I received from Dr. Keyes as to the treatment to be followed were as follows: Stop the suppositories and give alcohol in-

stead ; gradually increase the time between the introduction of the catheter, extending the time five minutes every day ; wash out the bladder twice a day with as hot water as the patient could stand, throwing it in with as much force as possible.

A Pollitzer's air bag and a No. XII silver was used to carry out this step of the treatment.

During the night of the 4th, the urine was passed naturally upon two occasions, and the catheter was passed every 65 minutes during the 24 hours.

Wednesday, the 5th, patient very weak ; pulse 130 ; temperature 99½ ; no appetite and increased thirst. During the 24 hours passed 20 ounces of urine very heavily loaded with pus.

Thursday, 6th, pulse 140 ; temp. 98¼ ; patient very weak and irritable ; injection of the bladder aggravating symptoms and patient much prostrated afterwards ; urine less in quantity ; took more nourishment in the afternoon. During the night of Thursday he vomited twice ; first the contents of the stomach, afterwards an olive green liquid entirely odorless.

Slept more during the night than at any time since the operation.

Friday forenoon pulse 120 ; temp. normal ; complaining of the vomiting which recurred 3 or 4 times in the morning (early). I ordered chopped ice and small doses of brandy, afterwards twenty grain doses of bismuth sub. carb. and pepsin, which checked vomiting for several hours. The facial expression had changed much since last seeing him, the eyes being glazed and features pinched, noticeably the nose.

The nurse reported to me the small quantity of urine passed during the night and forenoon, which, upon measurement, amounted to about 4 ounces.

This day, after 12 o'clock, noon, no urine was passed, there being complete suppression.

Friday afternoon I called upon Dr. Keyes and reported condition of the patient, and he ordered inf. digitalis and potas. acetat., to be given every hour.

Half-ounce doses of the infusion, and 7½ grain doses of the potash were given every hour between Friday evening and Saturday night without effect. Warm stupes over the kidneys and bladder were kept up constantly.

Saturday, the 8th, slight intoxication was present ; patient cheerful when awake ; slept much during the day, but failing rapidly ; neuralgic pain in left foot caused much annoyance.

This day, at 3 P. M., dissolution going on rapidly. Brandy given by the mouth every half hour till 9 P. M., when hypodermic method was

resorted to. From 9 P. M. till 4 A. M. small doses per rectum of brandy and opium were given until death, which occurred at 4.25 A. M. Nov. 9th.

Autopsy made by Dr. Geo. R. Westbrook. Acute Pyelitis of both kidneys. Dilated ureters on both sides. Thickened walls to bladder; capacity decreased to two-fifths normal capacity. The *right kidney* was found to be at least one-third smaller than normal and further advanced in the disease. *Left kidney* normal in size, and upon section a few grains of stone were found in the pelvis. Both organs contained pus. The *ureters* dilated to twice their original size and contained free pus. The *bladder* contained free pus, say two drachms. It was sacculated at the base on either side, and no fragments of stone found in the bladder. Rapid decomposition of the pelvic organs was going on.

The Curator would be pleased to receive correspondence in regard to the exchange of microscopical slides. Address Dr. E. S. Bunker, No. 280 Henry Street, Brooklyn.

☞ *The Secretary requests members presenting specimens, to present therewith a written account of the history and anatomical appearance. An observance of this request on the part of the members would insure a much more satisfactory report of their cases.*

BENJ. F. WESTBROOK, *Secretary.*

OFFICERS FOR 1880.

At the Annual Meeting, January 8th, 1880, the following officers were elected:

President ..... ARTHUR MATHEWSON.
Vice-President..... WILLIAM WALLACE.
Secretary and Editor ..... BENJ. F. WESTBROOK.
Treasurer..... ..... THOS. R. FRENCH.
Curator..... E. S. BUNKER.
Committee on Microscopy..... R. HESSE, E. S. BUNKER, LANDON C. GRAY.
Committee on Publication..... HENRY N. READ.

Ἀσκληπιὸς ὁ Σωτὴρ

Χαρμα μέγ' ανθρωποισι, κακων θελκτῆρ' οδυναων.

Hymns of Homer, No. XVI.

PROLIFERATIONS.

——The subjoined reports of the Committee on Permanent Fund and Building and of the Librarian, presented at the Annual Meeting, were, with the recommendations, adopted by the Society.

Brooklyn, January 20th, 1880.

To the Medical Society of the County of Kings :

The Committee on "Permanent Fund and Building" beg leave to report :

1st. That they have been unable to do anything, except to thoroughly discuss the subject during the past year, for want of authority from the Society.

2d. That they think it advisable to make an effort to raise funds for the purchase of property for the accommodation of the Society.

3d. The Committee request that they be authorized to purchase any suitable property when they shall have raised sufficient to secure it; by and with the advice and consent of the Council.

4th. The Committee recommend that the Society appropriate, at this Meeting, the moneys now held by the Treasurer, and known as the Permanent Fund, to be used for the purchase of real estate, should the Committee and Council consider it wise to purchase during the coming year.

Our Society is now one of the largest and most flourishing of medical societies in the State, and the Committee think that the time has come for us to have a building of our own. They believe that this object can be accomplished in a year, or two years, at most, if every member will do his part. Therefore,

Resolved, That the Committee on Permanent Fund and Building be authorized to collect funds, by voluntary subscription, for the purchase of a permanent location for the Society.

Resolved, That said Committee, with the advice and consent of the Council, be authorized to purchase such real estate as may be needed for the accommodation of the Society.

Resolved, That the savings of the Society known as the Permanent Fund be, and are hereby, appropriated to the purchase of real estate, whenever said Committee and Council judge it wise so to invest it.

Respectfully submitted for the Committee,

Geo. G. Hopkins, *Chairman.*

ANNUAL REPORT OF THE LIBRARIAN FOR 1879.

There are at present 585 volumes in the library, showing an increase of 23 this year.

The library of Dr. Samuel Hart, contributed to the Society in 1878, was placed upon the shelves early last spring. The contribution consists largely of volumes published in the last decade and contains some valuable material. A closet has been erected for the accomodation of unbound back numbers of journals on file. Each set is tied up and labeled, and made quite easy of access. Here also are kept the duplicate back numbers, which are occasionally exchanged with those of other libraries to fill up incomplete sets in either library.

There seems to be little interest evinced in the building up of what should be an important part of this society.

To my mind the profession of Brooklyn would be better informed on medical subjects, if a library of considerable extent were established here, for it requires so much time and labor to visit the New York libraries that physicians are often obliged to remain uniformed on important subjects, simply on account of their inability to reach the necessary works.

The comfort of a free medical library would be great, and in benefiting our fellow-workers we would help ourselves, by keeping the strength of ready reference in our own rooms, and not be driven elsewhere for what, in such a large community, we should have near us. The journal department for the last four years is practically complete. Everything of importance in current medical literature during that time can be found on the shelves in the reading room.

The advantages to be derived from a library in conjunction with such a complete journal department must be manifest.

The greater part of the present library is of little value, as it consists largely of books that are seldom referred to. The greatest need is that of standard works of the present day, and in order to obtain these, I would respectfully suggest the following plan: That a committee of ten be appointed to wait upon the members of the Society and solicit subscriptions for the purchase of books. That in connection with the Librarian this committee be empowered to select and purchase the books for the first year. That this committee be named by the succeeding Council.

T. R. FRENCH,
Librarian of the Kings County Medical Society.

——TREATMENT OF DIARRHŒA IN TUBERCULOUS PATIENTS.—An elaborate statement of the dietetic rules for the treatment of diarrhœa in tuberculous patients is given in the *Lond. Med. Record*, Oct. 15, 1879.

——COTO BARK IN THE DIARRHŒA OF PHTHISIS. An earnest defense of the value of Coto Bark is furnished by Dr. Yeo to the *Practitioner*, Oct. 1879.

——TUBERCULOSIS IN INFANTS.—From a consideration of nine cases of tuberculosis in infants from ten weeks to ten months of age, including seven fatal cases with necropsies, Dr. Epstein concludes that the presence of the disease in infants is in most cases due to the infection with the milk of a tuberculous mother, and not to hereditary predisposition, as is usually supposed.—*British Med. Journal*, Oct. 18, 1879.

——Hypophosphites in Phthisis.—Dr. Coghill, in a critical review of the value of the hypophosphites of lime and soda, gives as the results of this treatment in 100 indiscriminate cases. "It seems evident from these statistics, that the hypophosphites have no claim whatever to the character and properties of a specific remedy in the developed stages of pulmonary consumption."—*London Med. Record,* Oct. 15, 1879.

——The Treatment of Phthisis.—A highly interesting and suggestive paper on this topic by Dr. Bartholow, is included in the Transactions of the Ohio State Medical Society, for 1879. It has been copied for the most part in the *Half-Yearly Compendium* for January, 1880.

——Sure Cure for Consumption. The latest discovery comes to us from Innsbruck. Prof. Rokitansky, junior, of that city, having reported some remarkable results from the inhalation of Benzoate of Sodium, it has been taken up with considerable *furore,* especially in Vienna, where the demand for the drug has been so extensive that the druggists have had difficulty in keeping up their supply. "It is bought up on every hand." According to the *Lancet and Clinic,* Nov. 22, it is administered by an atomizer, twice daily for seven weeks without interruption; the quantity used being governed by the body-weight—one part of the benzoate, in a five per cent. solution, being given to each one-thousand parts of the weight of the patient. The faculty of the University of Innsbruck has appointed a committee to investigate the claims of Rokitansky, some of whose colleagues dispute his credibility and motives.

——Mrs. Keith's Private Home for Nervous Diseases, started six years ago in Tompkins Avenue, now occupies pleasant and commodious quarters at 883 St. Mark's Avenue, near Brooklyn Avenue. The work has been quietly and steadily carried on, the aim being to provide a real home influence to nervous invalids. Mrs. Keith has the indorsement of those physicians who are acquainted with the work she has accomplished and hopes to do, and we suggest that those who are not, should visit the home and see for themselves.

In no way is the work a purely charitable one, else Mrs. K. would soon have to cease her efforts, judging from the many applications for charity she has received. Good services are rendered for a fair equivalent, and an inspection of the home is always in order. Dr. Ordronaux has expressed himself as pleased with the Home and its objects.

——Dr. Valentine Mott's Remedy for Chilblains.—Beef's Gall, ℥iv.; Ol. Terebinth, ℥iv.; Spts. Vini. Rect., 90 per cent. ℥i½; Tinct. Opii, ℥i. Mix.

Another formula for the same affection is, Beef Brine, Oi.; Potassæ Nitratis, ℥ii.; Aquæ. Ammoniæ, ℥iii; Mix.

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——The Sanitary Engineer, with which is incorporated *The Sanitary Register*, is a new monthly record of sanitary news. Published in London, at 138 Fleet Street, at 7 shillings, prepaid. The editor is Mr. Durant Cecil.

——The London Lancet.—This patriarch among the medical weeklies begins the new year with the weekly issue of 80 pages, 40 of which are devoted to scientific matter. For the first time, it comes with cut edges—an unmistakable improvement.

——The Regular Monthly Meetings of the Medical Society of the County of Kings are held at 8 P. M. on the third Tuesday of each month, at Everett Hall, 398 Fulton Street.

The February Meeting will be held on the 17th, at which time the following papers will be presented:

Dr. Shaw will give demonstrations of his paper on "Paralysis of the Insane."

Naso-pharyngeal Catarrh, by Dr. J. H. Sterling.

A case of Craniotomy, by Dr. J. J. Lamadrid.

——New Members.—At the January meeting the following new members were elected: Drs. G. H. Atkinson, B. J. Adams and E. Palmer. The following were proposed for membership: G. P. Oliver, 90 Kent St., E. D., J. M. Raub, 295 Clinton St., and C. de la Vergne.

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Chap. XI, Art, 2, of By-laws: "Any Member elected as Delegate to the Medical Society of the State of New York, who shall be unable to act as Delegate during two successive years, shall be considered to have vacated his position as Delegate."

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